2.0 ALTERNATIVES CONSIDERED IN THE CT EIS

This chapter describes the No Action Alternative and the Proposed Action Alternative, together with other alternatives that were considered but not analyzed in detail because they were not reasonable within the context of the NEPA. This chapter also discusses the Preferred Alternative, a subset of the Proposed Action Alternative. As specified in Public Law (PL) 105-119, the disposition of a tract or portions of a tract will not occur if the land is needed for national security mission support or until any necessary environmental restoration or remediation is completed. The DOE recognizes that meeting the conveyance and transfer criteria within the mandated 10-year timeframe may not be possible for all portions of these tracts. This chapter describes the Preferred Alternative, which outlines the potential timing of disposition of the individual tracts based on these criteria. The chapter includes information provided by both of the potential recipients as to their contemplated uses of the subject tracts. The chapter concludes with a comparison of the environmental consequences of the two alternatives analyzed.

The No Action Alternative is analyzed to provide a baseline for comparison with the potential environmental impacts that could result from implementation of the conveyance and transfer of each tract. The DOE is considering a single action alternative to carry out its statutory responsibilities, the Conveyance and Transfer of Each Tract Alternative (the "Proposed Action Alternative"). This alternative involves the consideration of the immediate conveyance or transfer disposition decision of a partial parcel, while delaying the disposition decision for the remainder of the parcel. The proposed DOE action under this alternative is the conveyance or transfer of each tract of land identified as suitable, either in whole or in part, to either Los Alamos County or their designee, or the Secretary of the Interior in trust for San Ildefonso Pueblo. The analysis considers the future contemplated actions by the recipients of parcels of land and the resulting indirect impacts. The DOE has identified its Preferred Alternative, which is a subset of the Proposed Action Alternative. Other alternatives were considered but were dismissed from further detailed analysis as being unreasonable in the context of NEPA because they do not meet the purpose and need for agency action. These various possible alternatives are discussed in the following sections of this chapter. At the close of the chapter, a comparison of the two alternatives analyzed is presented in table form.

2.1 No Action Alternative

The No Action Alternative of not conveying and transferring the subject parcels of land is analyzed in this CT EIS. NEPA implementing regulations require the consideration of an alternative of taking no action on an issue. In this case, the No Action Alternative would be the retention of ownership (for each or all) of the tracts by the Federal Government under the administrative authority of the DOE, and conveyance or transfer actions for each or all of the tracts would not occur. There would be no change anticipated in the overall land use of each of the tracts within the foreseeable future (over the next 10 years), which is consistent with the Preferred Alternative analyzed in the LANL SWEIS. Individual tracts would continue to be used to either support LANL uses (as undeveloped programmatic activity buffer zones; historic, cultural, or environmental preservation areas; future growth areas; or in support of ongoing or

similar mission support functions), or the DOE would continue to lease properties to the County for continuance of their current recreational, commercial, or public relations purposes. LANL Environmental Restoration (ER) Project activities would be conducted on the tracts as they become funded in accordance with either existing or similar plans developed with public and stakeholder input. Under this No Action Alternative, both the County and San Ildefonso Pueblo would need to seek other means of meeting their community self-sufficiency requirements and enhancing their economic diversification. A more detailed discussion of the No Action Alternative and how this alternative would result in a continuation of the status quo may be found in the individual tract discussions in Chapters 5 through 14 of this document.

2.2 Proposed Action Alternative

PL 105-119 (the Act) requires the DOE to convey or transfer the parcels of land preliminarily identified as suitable and for which the DOE has clear title within 3 years (36 months) of the enactment of the Act to the parties named, in the manner that they have agreed upon, and for the three future uses identified in the law. Provisions within the Act regarding this action allow the DOE to undertake conveyance or transfer either by the end of the third year after enactment of the Act or to delay a disposition decision for up to 10 years after enactment of the Act, ending November 26, 2007. The reasons provided under the Act to delay an immediate conveyance or transfer of the parcels are (1) that the property is required by the DOE for mission support purposes but may be released from such use within the 10-year period ending November 26, 2007 and/or (2) that the property is environmentally contaminated but may be remediated or restored by November 26, 2007. In the absence of either criterion being met by November 26, 2007, the DOE shall not convey or transfer the individual parcel(s). For the nine parcels that are currently either utilized for a mission-support function or that have some level of environmental contamination, the DOE will consider the potential disposition decision of immediately transferring the portions of a tract—as the "tract" was originally defined by the DOE in the April 1998 Land Transfer Report to Congress (DOE 1998b)—that do not require some level of environmental remediation or restoration or that are unneeded for mission support functions. For the retained portion of the tract there would be a later disposition decision based on whether environmental remediation or restoration or a release from need mission support use could be achieved within the 10-year period allowed under the Act, or a later no action decision would be made by the Secretary of Energy.

The DOE's proposed action of conveying and transferring land tracts is one that, on the part of the DOE, would involve certain "paper transactions" and certain physical tenant relocation activities. This type of action does not in and of itself generally result in significant environmental effects. Environmental restoration or remediation of the subject tracts identified for potential conveyance or transfer would be the responsibility of the DOE and are expected to be accomplished as currently considered by the DOE in its plan entitled *Accelerating Cleanup: Paths to Closure* (DOE 1998c) and similar plans. It is not anticipated that the cleanup efforts would differ much between the Proposed Action Alternative and the No Action Alternative, with the exception of some decommissioning, decontamination, and demolition actions that are currently part of LANL's ER Project; some timing of activities (cleanup of some tracts could be accomplished sooner than under the No Action Alternative); and some possible cleanup of floodplain areas. As such, most of the environmental restoration and remediation actions are not unique to the proposed action and do not generally involve significant

adverse environmental impacts. However, in considering the full suite of potential impacts that could result from DOE action in implementing the conveyance or transfer of these parcels, the DOE must consider the planned use of the land and the ensuing potential environmental impacts subsequent to the conveyance or transfer of administrative control or ownership. Both the County and San Ildefonso Pueblo have expressed interest in pursuing uses of the parcels for the purposes established by the Act in ways that are potentially different from the manner in which the DOE has used the land over the past 55 years. Therefore, the CT EIS analysis focuses on subsequent indirect impacts of property development and use by the County and by San Ildefonso Pueblo (including their tenants or other third parties) that could only occur if the DOE decides to convey or transfer the subject land tracts.

In order to consider the potential impacts and benefits that could result from use(s) of the 10 tracts after disposition, the contemplated land uses identified by the two potential recipients were considered. These land uses were developed by both potential receiving parties in accordance with their own internal government policies and processes. The land uses identified are not reflective of any DOE plans for the future use of these tracts. The DOE believes that the contemplated land uses encompass a range of reasonable and likely land uses, given the individual tracts' location, physical attributes, and obvious development constraints. Before implementation of any future use of each tract, the sponsoring party would need to comply with all applicable local, State, and Federal laws and regulations. This may include the preparation of project-specific EISs, environmental assessments (EAs), or the equivalent that may be required under State law.

The potential contemplated uses identified for each tract and considered in this CT EIS analysis are as follows:

- **The Rendija Canyon Tract:** cultural preservation or residential development and environmental preservation (natural areas)
- **The DOE Los Alamos Area Office (LAAO) Tract:** residential or commercial development
- **The Miscellaneous Site 22 Tract:** commercial development
- **The Miscellaneous Manhattan Monument Tract:** historic preservation
- **The DP Road Tract (North, South and West):** commercial and industrial development or residential and commercial development
- **The Technical Area (TA) 21 Tract:** commercial and industrial development
- **The Airport Tract:** airport, commercial, and industrial development
- **The White Rock Y Tract:** environmental preservation or cultural preservation
- **The TA 74 Tract:** cultural preservation or environmental preservation
- **The White Rock Tract:** cultural preservation and commercial development or commercial and residential development

Each of the tracts may have existing or future infrastructure uses that include: utility lines, utility support structures, supply wells, storage tanks or structures, water or effluent treatment structures, and transportation routes. The "footprints" for utility treatment facilities and such structures may be expanded in the future, given the potential for increased use demands upon those systems.

New roads may be constructed to facilitate private or public vehicular traffic. Chapters 5 through 14 contain discussions of the land uses for each tract in more detail, including how an individual tract may be divided by two different collocated land uses.

2.3 Preferred Alternative

The DOE has identified the following subset of the Proposed Action Alternative, by tract, as its Preferred Alternative. Tracts are listed below in an approximate order of potential timing of disposition; the actual order of tract disposition may be slightly different. Consistent with PL 105-119, the actual disposition of each tract, or portion of a tract, would be subject to the DOE's continuing or future need for an individual tract, or a portion of the tract, to meet a LANL national security mission support function. This need could result from either direct or indirect activity involvement. Additionally, the disposition of each tract, or portion of a tract, would be subject to the ability of the DOE to complete any necessary environmental restoration or remediation.

The DOE has concluded that significant portions of two tracts (the TA 21 Tract and the Airport Tract) will not be available for conveyance or transfer within the 10-year period specified by PL 105-119. This is due to identified national security operational needs of two facilities within TA 21 and the need for surrounding areas to be retained as security, health, and safety buffer areas. The area of buffer retention is roughly equivalent to about a one-half mile radius from the facility sites and includes portions of the TA 21 Tract and the Airport Tract.

The DOE also recognizes with regard to six of the remaining tracts that meeting the conveyance and transfer criteria within the mandated 10-year timeframe may not be possible for all portions of these tracts. For example, the current national security mission support functions that are conducted on the DOE LAAO Tract and the DP Road Tract could possibly require portions of the tracts to be retained for use beyond the 10-year timeframe established by the Act, although this is considered to be unlikely. Similarly, there may be newly proposed activities at LANL facilities that could require the retention of portions of tracts for national security mission support reasons. One example of this is a proton radiography project that recently has been proposed for consideration through the DOE's fiscal year 2001 budget. The DOE will evaluate this project over the next several months to determine whether the project should proceed. The project evaluation will include a NEPA analysis that considers alternatives to the proposed actions, which will then be used to inform a project decision(s). Engaging in this proposed project could result in an expanded security, health, and safety buffer area(s) being required that may intrude upon one or more of the tracts under consideration for disposal. Because the White Rock Y Tract is the nearest subject tract to one of the alternative LANL locations that will likely be evaluated for the proton radiography project, the DOE ultimately could require that this tract be reduced to a partial tract status for disposition. In this case, only essential areas would be retained, and the remainder of the tract would likely be conveyed or transferred.

Further uncertainty regarding the DOE's ability to convey or transfer all of the tracts results because some portions of the six tracts have associated contamination issues. Those portions of the tracts may potentially require environmental restoration or remediation that could be technically difficult to achieve or that could require more than the 10-year period established under the Act for completion of these actions. The LANL ER Project process, which includes input from stakeholders and approval by the Administrative Authority(s), will proceed with the anticipation of completing the necessary environmental restoration and

remediation actions by the end of the year 2007. However, the DOE recognizes that some tracts that have contamination issues are going to consume more time and resources and be more expensive to clean up because the cleanup technical strategy could change from those currently planned by the ER Project. For example, in the case of the TA 21 Tract, the regulatory authority(s) could require exhumation of material disposal sites on that tract, rather than the currently planned capping, long-term monitoring strategy, and possible exhumation strategy. Further, it is not certain that cleanup of all of this tract is technically feasible. Reaching agreement on the cleanup approach and conducting the necessary testing and remedial action could be a lengthy process. The extra funding required for such a change in the planned cleanup also may require the appropriation of additional funding from Congress. In other cases, some tracts include portions of canyon floodplains, which could be difficult to remediate. Given such considerations, it may not be possible to complete all of the necessary remediation or restoration actions to release all portions of the subject tracts within the allotted timeframe.

The DOE is confident that it can convey or transfer in whole two tracts in the near term; these two tracts are not currently used nor are they anticipated to be needed in the future for national security mission support needs. Although one of the tracts has a minor surface disposal site, it can easily be remediated within a short period of time. These two tracts are the Miscellaneous Manhattan Monument Tract and the Miscellaneous Site 22 Tract.

The Preferred Alternative for conveyance and transfer of the 10 land tracts identified as potentially suitable, per the criteria established in PL 105-119, is as follows (within each grouping no order of conveyance and transfer is intended):

Convey or Transfer Entire Tract in the Year 2000, or Soon Thereafter:

- Miscellaneous Manhattan Monument Tract
- Miscellaneous Site 22 Tract

Convey or Transfer Entire Tract or Partial Tract (Portions of Tract Without Potential Contamination Issues or Mission Support Concerns) in the Year 2000, or Soon Thereafter, But Before the End of the Year 2007:

- DOE LAAO Tract
- White Rock Tract
- Rendija Canyon Tract
- TA 74 Tract
- DP Road Tract
- White Rock Y Tract

Convey or Transfer Partial Tract (Portions of Tract Without Potential Contamination Issues or Mission Support Concerns) at a Later Time, But Before the End of the Year 2007:

- TA 21 Tract
- Airport Tract

For the tracts that are conveyed in part, the DOE would continue to resolve outstanding national security mission support issues and any contamination cleanup required on the remaining portions of the tracts so that conveyance or transfer of those portions could occur before the end of the 2007 deadline stated in the Act. The six tracts with possible partial tract conveyances or transfers are discussed individually in more detail in the following paragraphs.

The DOE LAAO Tract is partially occupied by the DOE Los Alamos Area Office Building and parking lot area that currently houses about 120 DOE staff and contractor staff personnel. The site also has three small potential release sites (PRSs) that

have already been remediated, although the remediation has not yet received regulatory concurrence. There are two tract buildings that may require decontamination and decommissioning (D&D) as well. The duration of these efforts is estimated to involve up to about 18 months and cost from about $4,253,000 to about $9,680,000.

The White Rock Tract has no known PRSs within its boundaries that would require remediation or restoration. However, the tract is bisected by a floodplain area that has not yet been sampled for possible contaminants. Investigation of the floodplain must be conducted, and although it is not anticipated that levels of site contamination would warrant remediation, some remediation may nevertheless be required. The duration of these efforts is estimated to involve up to about 16 months and cost from about $954,000 to about $3,374,000.

The Rendija Canyon Tract has four PRSs within its boundaries; three of these sites have already been remediated and restored although the remediation has not yet received regulatory concurrence. The tract also is bisected by a floodplain area in which sampling efforts must be conducted, and some areas of site remediation may be warranted. The duration of remediation is estimated to involve up to about 30 months and cost from about $19,053,000 to about $20,462,000.

The TA 74 Tract has four PRSs within its boundaries; all four of these sites have already been remediated and restored although the remediation has not yet received regulatory concurrence. The tract also is bisected by floodplain areas in which sampling efforts must be completed, and site remediation may be warranted. The tract could continue to receive contamination from upstream areas, so additional offsite investigation and remediation also may be warranted. The duration of tract remediation is estimated to involve up to about 22 months and cost from about $3,683,000 to about $215,666,000.

The DP Road Tract is occupied by two large buildings: one that is used for the LANL archive storage and one that is used for a contractor support facility. Additionally, the tract has 10 PRSs within its boundaries and eight small structures. Two of the PRSs have already been remediated and restored, and the remediation has received regulatory concurrence; the others remain under investigation or have been remediated and are awaiting regulatory concurrence. The tract also shares a floodplain area with the Airport Tract along DP Canyon, where cleanup is warranted. The duration of remaining investigation and possible site remediation is estimated to involve up to about 84 months and cost from about $26,986,000 to about $29,070,000.

The White Rock Y Tract has no PRSs within its boundaries. However, the tract is bisected by a floodplain area in which sampling efforts must be conducted, and some areas of site remediation may be warranted. The tract could continue to receive contamination from upstream areas, so additional offsite investigation and remediation also may be warranted. The duration of remediation is estimated to involve up to about 24 months and cost from about $1,880,000 to about $10,424,000.

The environmental impacts of the Preferred Alternative, based on current information, would be expected to be between those presented for implementation of the Proposed Action and the No Action Alternatives for each tract. The impacts of these actions are discussed in following sections.

2.4 Alternatives Considered But Eliminated from Detailed Analysis

Alternative actions that were considered but not analyzed in detail are discussed in the following paragraphs. These alternative actions include

- Conveyance or transfer to parties other than those identified by the Act (see Section 2.4.1)
- Conveyance or transfer of the 10 tracts to other Federal agencies, such as the U.S. Department of the Interior, National Park Service (NPS), or the U.S. Department of Agriculture, U.S. Forest Service (USFS) (see Section 2.4.2)
- Conveyance or transfer of tracts with the retention of those tracts or portions of tracts with identified sensitive resources (such as wetlands, cultural or historic resources, or threatened or endangered species) (see Section 2.4.3)
- Conveyance or transfer of parcels with cultural and natural resources to other Federal agencies whose jurisdiction includes management of these resources at a level consistent with or greater than is currently performed by the DOE (see Section 2.4.4)
- Retention by the DOE of areas where the contemplated land use would be in conflict with surrounding land uses (see Section 2.4.5)
- Conveyance or transfer of two parcels of land not included in the April 1998 Land Transfer Report (DOE 1998b) (namely, the so-called University Site on State Road 4 and the Research Park Phase II site) (see Section 2.4.6)
- The deletion the 25-acre (10-hectare) "DP South" Tract from the DP Road Tract and the eastern three-fourths of the 260-acre (105-hectare) TA 21 Tract from the scope of the CT EIS (see Section 2.4.7)
- Maintaining assistance payments and not engaging in land conveyance or transfer (see Section 2.4.8)

2.4.1 Conveyance or Transfer to Parties Other than Those Identified by the Act

The conveyance or transfer of the 10 subject tracts to parties other than those identified by the Act was considered. The named recipients under the Act are the Incorporated County of Los Alamos (or their designee) and the Secretary of the Interior, in trust for San Ildefonso Pueblo. Therefore, the conveyance or transfer of the subject tracts to parties other than those two named in the Act would not allow the DOE to meet its need to comply with the requirements of the Act. Potential impacts that might be associated with the development and use of the 10 subject tracts by parties other the County and San Ildefonso Pueblo would likely be very similar in nature to those that are analyzed in the CT EIS for the conveyance or transfer to those two parties. The two parties named in the Act to receive the property propose uses that are representative of both private-sector individuals or corporations and of other area Federal agencies. For individual tracts, the potential for individual resource area impacts may be either less than or greater than those analyzed in the CT EIS, but would likely not result in vastly different cumulative impacts than those analyzed. This alternative is not analyzed further in this CT EIS.

2.4.2 Conveyance or Transfer to Other Federal Agencies

A suggested alternative of transferring the 10 tracts to other area Federal agencies, such as the NPS (U.S. Department of the Interior) or the USFS (U.S. Department of Agriculture), was considered. A portion of the 10 parcels are proposed for transfer to the Secretary of the Interior, under the direct management of the Bureau of Indian Affairs, to be held in trust for the San Ildefonso Pueblo. The remaining parcels of land would convey to a non-Federal Government entity, the County of Los Alamos. Transferring all 10 tracts to either the U.S. Department of the

Interior, either in trust for San Ildefonso Pueblo or for other potential agency use, or to another Federal Government agency would not comply with the requirements of the Act. Although such an action could possibly delay their ultimate conveyance, it may not preclude it because all government agencies are being asked to identify and convey or transfer lands that are not necessary for their mission use.

The USFS has management responsibility for lands within the Santa Fe National Forest. Their management is directed toward the wise use of land and resources under multiple use and sustained yield principles in order to provide optimum, long-term public benefits. The Santa Fe National Forest strives to meet the needs and desires of present and future generations. Existing uses of Santa Fe National Forest lands surrounding the Los Alamos townsite include tourism, mining, recreational activities (including hiking, hunting, fishing, camping, climbing, and skiing), and other traditional uses including firewood gathering and cutting of trees for vigas and latillas. The NPS, Bandelier National Monument (BNM) manages lands south and east of lands managed by the DOE and the town of Los Alamos. The lands managed by BNM are managed to protect and preserve all cultural and natural resources and provide opportunities for visitor understanding and enjoyment of those resources in a manner that preserves these resources for future generations. People visit BNM to hike, backpack in the wilderness, camp, picnic, visit the ruins, learn about the ancient and current Pueblo Indian culture, and enjoy the peace and special ambiance of the monument. While these properties could be used by the surrounding area Federal agencies to meet their mission support requirements, they are not known to be vital to these agencies' mission use needs.

In the usual course of events, unneeded government real properties are turned over to the General Services Administration (GSA) for disposal. Other Federal agencies are first notified of the availability of the land and, if another Federal usage need is identified, GSA would then arrange for the administrative control of the land to be turned over to that Federal agency for their use. Next in line for disposal of real estate would be State and local agencies and eligible nonprofit organizations for specified public uses. Purchase of the property at fair market value under competitive sale for unrestricted use is the last resort of the GSA for disposal of surplus land. Assuming that the land parcels were transferred to another Federal agency that identified the land as surplus and employed the GSA disposition process, then the potential impacts from use of the parcels would likely be very similar to those analyzed. This alternative is not analyzed further in this CT EIS.

2.4.3 Conveyance or Transfer Except for Tracts with Sensitive Resources

The conveyance or transfer of parcels while retaining those tracts or portions of tracts with identified sensitive resources (such as wetlands, cultural or historic resources, or threatened or endangered species) was considered. Under this alternative, the DOE would not meet its need to comply with the requirements of the Act, nor would it meet its requirement to comply with the *Endangered Species Act* (ESA) of 1973. Potential mitigations for dealing with sensitive resources present on the parcels will be included in the mitigations recommended by this CT EIS, although the DOE will not, in all cases, be responsible for seeing that these are carried out by the named recipients. Retaining these parcels or portions of parcels with sensitive resources would likely result in similar impacts to those potentially encountered by the conveyance and transfer of the land, although perhaps not on the same scale as identified by the contemplated land uses. If the DOE retained a portion of a tract and conveyed or transferred the remainder of

the tract, enforcement of protection of the retained portion would be very burdensome to the agency and perhaps effectively impossible. Such action would likely require fencing of the sites, which would effectively notify the public as to the location of these resources. Fencing of these sites could result in additional taking of threatened or endangered species or site disturbance and potential illegal pot-hunting actions by the public if archeological resources are present. This alternative is not analyzed further in this CT EIS.

2.4.4 Conveyance or Transfer of Tracts with Cultural and Natural Resources to Other Federal Agencies

The transfer of all of the parcels with cultural and natural resources to other Federal agencies having administrative and legal capabilities to manage these resources to a level consistent with or greater than is currently performed by the DOE was considered as an alternative. This alternative would not allow the DOE to meet its requirements under the Act. As already mentioned, it is likely that other Federal agencies would ultimately dispose of the land, and similar potential impacts analyzed in this CT EIS would still occur in the future. This is because a less stringent level of protection to threatened and endangered species is required of non-Federal Government agencies under the ESA; very little protection to archeological, cultural, or historic sites is afforded under the various applicable laws by non-Federal Government entities. This alternative is not analyzed further in this CT EIS.

2.4.5 DOE Retention of Areas with Conflicting Land Uses

Retention by the DOE of areas where the proposed land use is in conflict with surrounding land uses was considered. Such an alternative would not allow the DOE to meet the requirements set forth in the Act. Due to the manner in which the Los Alamos County area was developed, there are many areas of incongruent land use. In this case, the identified contemplated land uses are consistent with neighboring land uses, so the issue is moot. This alternative is not analyzed further in this CT EIS.

2.4.6 Convey or Transfer Two Parcels Not in Land Transfer Report

The conveyance or transfer of two parcels of land not included in the April 1998 Land Transfer Report (DOE 1998b) (namely, the so-called University Site on State Road 4 and the Research Park Phase II site) was considered.

The DOE and LANL have reviewed contemplated future mission requirements. The conclusion of months of analysis has indicated that the 10 parcels of land named in the April 1998 Land Transfer Report to Congress identified the parcels of land that could potentially qualify for conveyance and transfer. The two parcels suggested for inclusion in the CT EIS analysis were determined to be required for mission support uses beyond the 10-year period designated in the Act. This alternative is not analyzed further in this CT EIS.

2.4.7 Deletion of Two Tracts from CT EIS Scope

The suggested deletion of two portions of tracts from the scope of the CT EIS (namely, the 25-acre [10-hectare] “DP South” Tract and the eastern three-fourths of the 260-acre [105-hectare] TA 21 Tract) was reviewed. DOE and LANL management resources have carefully reviewed the mission requirements and the land and facility use needs of each organization at the LANL site.

The two tracts recommended for exclusion were identified as potentially being suitable for transfer at some time prior to November 26, 2007. Making what would be

essentially a no action determination on these parcels at this time is inappropriate. This alternative is not analyzed further in this CT EIS.

2.4.8 Reinitiate Assistance Payments Without Conveyance or Transfer

Reinitiating assistance payments to the County and not effecting the conveyance or transfer of the preliminarily identified parcels was an alternative considered that would not meet the letter or intent of the Act. The environmental impacts of such an alternative are inherently considered in the analysis of the No Action Alternative. Such action on the part of the DOE would require additional congressional legislation before it could be undertaken. This alternative was not analyzed further in this CT EIS.

2.5 Comparison of Environmental Consequences of the No Action Alternative and the Proposed Action Alternative

2.5.1 Environmental Impacts

The environmental impacts of the proposed conveyance and transfer of the 10 land tracts are described below. The assumptions associated with the analysis of impacts are provided. The impacts are broken out into direct and indirect impacts. The impacts of the No Action Alternative are compared to the impacts projected to result from implementation of the Proposed Action Alternative in Table 2.5.1-1 (at the end of this chapter). As an aide to the reader, a second table (Table 2.5.1-2) is provided that presents a summary of the impacts of the Proposed Action Alternative on a tract-by-tract basis. The environmental impacts of the Preferred Alternative, based on current information, would be expected to be between those presented for implementation of the Proposed Action and the No Action Alternatives for each tract.

2.5.1.1 Analysis of Impacts

The land tracts are part of LANL with the exceptions of the Rendija Canyon and Miscellaneous Manhattan Monument Tracts. Because the tracts are part of or near LANL, the information contained in the LANL SWEIS (DOE 1999c) analysis is used with regard to environmental resources or existing conditions in the CT EIS. The four alternatives analyzed in the SWEIS relate to varying levels of operations at LANL. The TA 21 Tract has the only facilities analyzed in the SWEIS that are located on the subject tracts, while the other tracts are either excluded from the SWEIS analysis or remain unchanged in land use across the SWEIS alternatives. The SWEIS Preferred Alternative is used as the basis for the CT EIS No Action Alternative because it provides a reasonable upper "bounding analysis" of impacts regarding those resources of concern. This approach assures that the CT EIS has not underestimated the potential impacts that may result from the conveyance and transfer of the subject tracts.

Implementing the SWEIS Preferred Alternative would maximize use of electric power due to expanded LANL operations; more people being hired, mostly for long-term employment; and more LANL workers being exposed to radioactive materials and processes. In particular, the level of use of utilities (such as electricity and natural gas), waste management and disposal facilities, and groundwater resources are greater in the SWEIS Preferred Alternative.

Timeframe of Analyses

The schedule for conveyance or transfer of each tract, either in whole or in part, and the potential recipient's eventual development of the tracts cannot be accurately determined at this time. Therefore, the relation of those schedules to the schedule for full

implementation of the activities described in the SWEIS Preferred Alternative also cannot be evaluated. In order to provide bounding analyses, it is assumed in this CT EIS that the SWEIS Preferred Alternative has already been fully implemented, and all of the tracts are conveyed or transferred and developed within the next 10 years. This assumption, while ensuring the analyses of impacts bound those likely to occur, may be overly conservative in some cases. Those cases where the analyses may be overly conservative (for example, in estimating when utility demand may exceed capacities) will be identified.

Direct and Indirect Impacts

Once the land tracts are conveyed or transferred, they will pass beyond the administrative control of the DOE. All subsequent use of the land will be independent of the DOE. Therefore, for the purpose of this CT EIS, all impacts associated with actions that would be undertaken by the DOE due to the proposed conveyance and transfer of the land tracts are described as direct impacts. All subsequent impacts resulting from actions undertaken by the recipients after the proposed conveyance and transfer of the tracts are described as indirect impacts.

2.5.1.2 Comparison of Direct Impacts

A comparison of the impacts of the No Action Alternative and the impacts projected to result from implementation of the Proposed Action Alternative are presented in Table 2.5.1-1. The direct and indirect impacts of the Proposed Action Alternative are also discussed below. The impacts of the No Action Alternative are detailed where they differ from those presented in the SWEIS.

The direct impacts of the proposed conveyance and transfer of the subject tracts consist of those associated with the relocation of DOE LANL operations and personnel who currently reside on the various tracts. Employees requiring relocation could be moved to existing buildings on other parts of LANL property, or new buildings could be constructed. These plans are not ripe for decision. Any decision regarding construction of new facilities would be preceded by appropriate NEPA review.

There would be no difference in direct impacts between the conveyance and transfer of the tracts and the No Action Alternative in infrastructure, noise, visual resources, socioeconomics, geology and soils, water resources, or human health.

The differences between the direct impacts of the conveyance and transfer of the tracts and the No Action Alternative in land use, transportation, ecological resources, cultural resources, and air resources are discussed by affected resource in the following paragraphs.

Land Use

Under the No Action Alternative, no specific changes in land use or direct impacts are anticipated. Completion of environmental restoration activities, including decontamination, decommissioning, and possible demolition of DOE facilities may allow possible changes in future land use. Environmental restoration activities would proceed in accordance with existing and developing plans. Worker impacts associated with environmental restoration activities cannot be projected at this time. Environmental restoration activities would be subject to their own DOE NEPA review.

Under the Proposed Action Alternative (the conveyance and transfer of the tracts, in whole or in part), no specific changes in land use or direct impacts are anticipated. In general, environmental restoration activities are independent of the conveyance and transfer process; but, the conveyance and transfer scenarios may influence decisions on the timing, cleanup levels, and the inclusion of certain buildings in environmental

restoration activities. The waste estimates would be roughly the same as for the No Action Alternative.

Transportation

Under the No Action Alternative, no specific changes in direct impacts in transportation are anticipated.

Direct consequences of the conveyance and transfer of the tracts under the Proposed Action Alternative include small alteration of the overall daily commute. DOE and contractor personnel relocated from the DOE LAAO, TA 21, and DP Road Tracts would have to change their commuting routes. Some DOE and contractor personnel may have a shorter drive to work, those living in White Rock for example; but, most would have farther to travel.

Ecological Resources

Under the No Action Alternative, no specific changes in direct impacts to ecological resources are anticipated.

Direct impacts of the Proposed Action Alternative (the conveyance and transfer of the tracts) are limited to the changes in responsibility for resource protection. Environmental review and protection processes and procedures for future activities would be different from those that are currently governing the subject tracts and may not be as rigorous. The LANL Threatened and Endangered Species Habitat Management Plan would no longer be in effect for those tracts occupied by or containing suitable habitat for endangered species.

Cultural Resources

Under the No Action Alternative, no specific changes in direct impacts to cultural resources are anticipated.

Direct impacts of the Proposed Action Alternative (the conveyance and transfer of the tracts) are limited to the potential transfer of known and unidentified cultural resources and historic properties out of the responsibility and protection of the DOE. Under the Criteria of Adverse Effects (36 Code of Federal Regulations [CFR] 800.5(a)(1)), the transfer, lease, or sale of resources eligible for listing on the National Register of Historic Places (NRHP) is an adverse effect. NRHP eligible resources are present on nine of the tracts being assessed in this CT EIS and would be directly impacted by the Federal action. The disposition of each of the subject tracts also may affect the protection and accessibility to Native American sacred sites or sites needed for the practice of traditional religion by removing them from consideration under the *American Indian Religious Freedom Act*, the *Religious Freedom Restoration Act*, and Executive Order 13007, "Indian Sacred Sites." In addition, the disposition of the tracts would potentially affect the treatment and disposition of any human remains, funerary objects, sacred objects, and objects of cultural patrimony that may be discovered on the tracts under the *Native American Graves Protection and Repatriation Act*.

Air Resources

Under the No Action Alternative, no specific changes in direct impacts in air resources or global warming are anticipated.

Direct consequences of the Proposed Action Alternative (the conveyance and transfer of the tracts) include small alteration of the overall daily commute. DOE and contractor personnel relocated from the DOE LAAO, TA 21, and DP Road Tracts would have to change their commuting routes. Some DOE and contractor personnel (for example, those living in White Rock) may have a shorter drive to work; but, most would have farther to travel. This would result in slightly greater emissions.

2.5.1.3 Comparison of Indirect Impacts

Indirect impacts are anticipated from the subsequent uses contemplated by the

receiving parties for several of the 10 tracts (see Table 2.5.1-2). The receiving parties have identified a combination of contemplated uses for the tracts after conveyance or transfer. These uses include development of part or all of some of these tracts. Estimates of the development acreage reflect the best available information on the footprint of the contemplated developments. This acreage may include the redevelopment of disturbed land as well as the new use of relatively undisturbed areas. The impact analysis assumes that these footprints represent an approximation of areas that would be developed but that may not include all areas that would otherwise be disturbed. Likewise, there are no specific acreage estimates for land that may be disturbed or developed for land uses that include undefined improvements to utilities or recreational areas. These areas are qualitatively addressed in the impact analysis.

Land Use

Under the No Action Alternative, no specific changes in land use or indirect impacts are anticipated.

Under the Proposed Action Alternative, the indirect impacts of the conveyance and transfer of the tracts include regional changes in land use, such as the development of forest, grazing, and open-space land for residential and commercial uses. Future land use patterns could change on several tracts. Approximately 826 acres (335 hectares) of the total acreage proposed for transfer and conveyance could be developed or redeveloped for other uses.

There is the potential for the introduction of land uses that would be incompatible with adjacent landowners' resource protection efforts. There may be loss of recreational opportunities currently enjoyed on some tracts.

While cumulative impacts to land use affect only a small percentage of the total region, many of the anticipated impacts are concentrated in the vicinity of Los Alamos, LANL, and White Rock and therefore could appear substantial.

Transportation

Under the No Action Alternative, no specific changes or indirect impacts in transportation are anticipated.

Under the Proposed Action Alternative (the conveyance and transfer of the tracts), commercial, industrial, and residential developments would greatly increase the number of trips generated. Peak-hour traffic entering or exiting 6 of the 10 tracts could increase by a range of approximately 751 to 3,775 trips. There could be a positive regional traffic impact in that more LANL employees could live in Los Alamos and reduce the overall commuter traffic from other areas.

Cumulative impacts to regional transportation include substantial increases in overall regional and local traffic that would require improvements to traffic controls, new roads, road widening, and bridges. The anticipated impacts to transportation would be expected to be concentrated near the Los Alamos townsite and the LANL area.

Infrastructure

Under the No Action Alternative, the electrical system is already at the limits of its capacity. With the addition of the Strategic Computing Complex (SCC) and other regional developments, the electric power demand will exceed system capacity.

Under the Proposed Action Alternative, the total estimated increases in utility usage associated with the development of the tracts would be as follows:

- Electricity use: 32 gigawatt-hours (gwh)
- Peak power: 6 megawatts (mw)

- Natural Gas: 459 million cubic feet (mcf) (13,000 million liters per year [mly])
- Water: 382 million gallons per year (mgy) (1,446 mly)
- Solid Waste: 2,385 tons per year (tpy) (2,163 metric tons per year [mty])

Increases in discharges to wastewater treatment plants could be 132 mgy (500 mly) for the Bayo Wastewater Treatment Plant and 41 mgy (155 mly) for the White Rock plant.

The increase in peak electricity demand is in addition to the already anticipated exceedance of the capacity of the electrical power system. Water usage demand is projected to exceed water rights. The natural gas delivery systems may have to be upgraded to handle the increased demand. The existing wastewater treatment capacity is expected to be exceeded. Solid waste production is expected to reduce the expected life of the regional landfill. However, given the conservative assumptions used in the calculations and the phased development of the tracts, the actual utility usage may not reach capacity limits within the next 10 years.

Noise

Under the No Action Alternative, no specific changes in indirect impacts in noise are anticipated.

Under the Proposed Action Alternative, ambient noise levels would be expected to increase above current levels for most of the contemplated land uses. Ambient noise levels associated with cultural preservation may decrease, and noise levels associated with natural areas would be expected to remain the same or increase slightly. Noise associated with transportation and utility corridors would remain the same or could increase with additional infrastructure construction and use. Demolition and construction activities would be expected to temporarily elevate noise levels on the tracts from the No Action Alternative levels to a range of 74 to 95 decibels (dB) on the A-weighted scale (dBA). Residential uses typically would result in ambient noise levels between 50 and 70 dBA depending on traffic, density, and location. Commercial and industrial land uses typically would result in 60 to 70 dBA. Noise would be present during a greater part of the day than currently on the tracts that are developed for residential, commercial, and industrial land uses. Overall noise from vehicular traffic would increase.

Visual Resources

Under the No Action Alternative, no specific changes in indirect impacts in visual resources are anticipated.

Under the Proposed Action Alternative, most of the tracts would maintain their current level of visual aesthetic value after conveyance and transfer and any subsequent development. However, the development of currently undeveloped areas, such as the Rendija Canyon and White Rock Tracts, would typically degrade the visual landscape. The reduction in visual quality would not be substantial on a regional scale, but local diminished viewsheds could impact resources important to maintaining a positive visitor experience on adjacent NPS lands.

Socioeconomics

Under the No Action Alternative, no specific changes in indirect impacts in socioeconomics are anticipated.

Under the Proposed Action Alternative, short-term economic gains would be expected from employment due to construction activities for new development. Long-term gains would depend on the intensity and success of the development. Depending on the scenarios implemented, 320 businesses could be developed on the tracts, employing up to 6,080 workers and generating a total of 8,957 jobs within the region of influence (ROI). As many as 2,360 residences could be placed on

the tracts, increasing White Rock and Los Alamos population by 6,620 residents.

Overall impacts to employment, income, population, and housing would be minor within the ROI, but would be concentrated in the Los Alamos area. Improvements would be expected in the Los Alamos County tax base but would probably not offset the loss of assistance payments, according to information provided by the County (see Chapter 18, Section 18.1).

Ecological Resources

Under the No Action Alternative, no specific changes in indirect impacts in ecological resources are anticipated.

Under the Proposed Action Alternative, development footprints for the 10 tracts include approximately 770 acres (312 hectares) of relatively undisturbed habitat, primarily ponderosa pine forest and pinyon-juniper woodland. Contemplated uses also would be expected to degrade large amounts adjacent habitat, including preferred habitat for the American peregrine falcon and the Mexican spotted owl.

Highly mobile wildlife would be forced to relocate to adjacent undeveloped areas. However, successful relocation may not occur due to increased competition for limited resources. For less-mobile species, direct mortality could occur during the actual construction or from habitat alteration. Habitat modification could affect several Federal-listed threatened and endangered species. Development in some tracts could result in direct loss of wetland structure and function with potential increased downstream and offsite sedimentation. The current lack of a natural resources management plan by either the County of Los Alamos or the Pueblo of San Ildefonso would impede the development of an integrated, multiagency approach to short- or long-term natural resource management strategies. Additionally, transfer of the land tracts may result in a much less rigorous environmental review and protection review process for future activities because neither the County of Los Alamos nor the Pueblo of San Ildefonso have regulations that would match the Federal review and protection process. Cumulatively, the development could result in fragmentation of habitat and disruption of wildlife migration corridors.

Cultural Resources

Under the No Action Alternative, no specific changes in indirect impacts in cultural resources are anticipated.

The development of approximately 826 acres (335 hectares) and use of tracts for recreation under the Proposed Action Alternative could result in physical destruction, damage, or alteration of cultural resources on the subject tracts and in adjacent areas and disturbance of traditional religious practices.

Geology and Soils

Under the No Action Alternative, no specific changes in indirect impacts in geology and soils are anticipated.

Under the Proposed Action Alternative, soil would be disturbed by development, new road building, and utilities. Removal of vegetation and increased runoff from new impermeable surfaces could increase erosion. The cumulative impacts to geology and soils would be insubstantial.

Water Resources

Under the No Action Alternative, no specific changes in indirect impacts in water resources are anticipated.

Under the Proposed Action Alternative, supplies of groundwater would be reduced, potentially accelerating drawdown of the main aquifer. Placement of new water supply wells could impact groundwater quality. New development could potentially degrade the surface water quality by increasing the

pollutant loads and surface runoff volumes from construction activity, and by creating additional impermeable surfaces such as roads and parking lots.

Air Resources

Under the No Action Alternative, no specific changes in indirect impacts in air resources are anticipated.

Under the Proposed Action Alternative, there would be increases in criteria pollutants from mobile sources and homes using natural gas or propane. Slight increases in emissions of hazardous air pollutants would be expected from the development of new industrial facilities. The current contributions to global climate change from the land tracts would increase more than 25-fold over the No Action Alternative due to motor vehicle traffic and residential use of fossil fuels. Additional use of artificial lighting could impact the visibility of the night sky.

Human Health

Under the No Action Alternative, no specific changes in indirect impacts in human health are anticipated.

Under the Proposed Action Alternative, as many as 900 new residents could be brought into closer proximity to LANL facilities at the DOE LAAO and DP Road Tracts, and another 2,200 residents and lodgers at the White Rock Tract. Commercial development could bring as many as 6,000 private-sector employees into existing one-half mile radiation site evaluation circles at the DP Road, TA 21, and Airport Tracts (discussion of these "circles" is provided in Chapter 4, Section 4.2.12.2). While the maximally exposed individual doses would not increase, these developments would mean increased total population exposures to radiological and chemical emissions from normal LANL operations and hypothetical accidents. A substantial increase in the public collective radiation dose and latent cancer fatalities would result. Risk of developing excess latent cancer fatalities on the subject tracts from accident events could maximally increase from about 57 excess cancer deaths to about 98 excess cancer deaths.

Development of the tracts by the recipients would involve construction with its attendant risks to workers. Should the development include industrial activities, these activities would involve commensurately greater worker risks.

Environmental Justice

There would be no impact to environmental justice under the No Action Alternative. Under the Proposed Action Alternative, there would be no direct adverse effects on minority or low-income populations. Any indirect effects would be specific to each land tract, not to populations, and could include possible disruption of traditional wood gathering activities. Indirect impacts to traditional cultural properties (TCPs) potentially may cause disproportionately high or adverse effects on minority or low-income communities, but these effects cannot be determined at this point in the consultation process. The Homesteaders Association of the Pajarito Plateau (as regards all of the subject tracts) and legal counsel for the Pueblo of San Ildefonso (as regards four specific tracts) have expressed their opinions that the conveyance and transfer of these tracts and their subsequent contemplated uses would have additional environmental justice impacts on their populations.

2.1.2 Mitigation Measures

Mitigations are actions or activities that can be taken to avoid, minimize, rectify, or compensate for anticipated impacts.

2.1.2.1 Mitigations Prior to Conveyance or Transfer

Prior to conveyance or transfer of any of the land tracts, the DOE will initiate cultural

resource consultations with the affected Pueblos and tribal nations and the State Historic Preservation Office(r), and complete consultation regarding threatened or endangered species or their habitat with the U.S. Fish and Wildlife Service (USFWS). In the case of conveyance of land tracts to the County, the DOE may include deed restrictions precluding any development within the 100-year floodplains or wetlands, consistent with the provisions of PL 105-119.

2.1.2.2 Recommended Mitigations

The DOE will coordinate consultations with the New Mexico State Historic Preservation Office(r), Advisory Council on Historic Preservation, receiving parties, and other interested agencies and parties to engage consideration of impacts on cultural resources resulting from the conveyance and transfer of the subject tracts from the responsibility and protection of the DOE. The goal of these consultations would be a formal Memorandum of Agreement (MOA) addressing the impacts of the potential loss of certain cultural resource protections and DOE responsibilities on the subject tracts, and defining specific procedures and responsibilities for managing cultural resource concerns upon transfer to the receiving parties. For example, the parties could consider the implementation of covenants that would ensure identification of all resources before development, minimization of the impacts to cultural resources, and protection of the rights of Native Americans regarding traditional religious practices. Other agreements among the parties could include development of agreements concerning threatened or endangered species habitat, integrated resource management plans, integrated emergency response plans, and future land use options.

2.1.2.3 Potential Resource-Specific Mitigations

Chapter 16 provides a large list of potential mitigation measures that were developed for each resource area. The mitigation measures suggest how specific aspects of individual impacts could be avoided or minimized. These potential measures range from seeking additional resources to offset predicted shortfalls in power and water supplies; providing new access and rights of way for neighboring land owners and utilities; and establishing habitat buffer zones through conservation programs, maintenance of natural vegetation, and erosion control; to implementing measures to control dust during construction.

Table 2.5.1-1. Comparison of Impacts of the Alternatives

RESOURCE AREA	NO ACTION ALTERNATIVE	PROPOSED ACTION ALTERNATIVE
Land Use	Current mission support, research and development and LANL activity buffer land uses would continue on the 10 subject tracts.	Implementation of the Proposed Action Alternative would cause regional changes in land use, including the development of forest and open-space land for residential, commercial, and industrial uses and dedication of tracts for cultural preservation or as natural areas. Approximately 826 acres (335 hectares) of the total acreage could be developed or redeveloped for other uses. There is the potential for the introduction of land uses that would be incompatible with adjacent landowners' resource protection efforts. There may be a loss of recreational opportunities associated with changes in land use. While cumulative impacts to land use affect only a small percentage of the total region, many of the anticipated impacts are concentrated in the vicinity of Los Alamos, LANL, and White Rock and, therefore, could appear substantial.
Environmental Restoration	Environmental restoration activities would proceed in accordance with existing and developing plans and would be subject to their own NEPA review. Worker impacts associated with environmental restoration activities cannot be projected at this time. Completion of environmental restoration activities, including decontamination, decommissioning, and possible demolition of DOE facilities on these tracts would result in preliminary projected waste volumes of up to 207,860 cubic yards (158,820 cubic meters). These include 42,300 cubic yards (32,320 cubic meters) for the cleanup of potential release sites (PRSs); 61,970 cubic yards (47,350 cubic meters) for the decontamination and decommissioning (D&D) of structures and 103,590 cubic yards (79,150 cubic meters) for remediation of canyon systems.	Environmental restoration activities are generally independent of the conveyance and transfer process; but, the conveyance and transfer scenarios may influence decisions on the timing, cleanup levels, and the inclusion of certain buildings in environmental restoration activities. The waste estimates would be roughly the same as for the No Action Alternative.

Table 2.5.1-1. Comparison of Impacts of the Alternatives (Continued)

RESOURCE AREA	NO ACTION ALTERNATIVE	PROPOSED ACTION ALTERNATIVE
Transportation	Under the No Action Alternative, traffic generated from tract activities would not change from current levels. Gradual increases in regional traffic levels, especially during peak hours, would be expected to continue due to population growth, other area developments and increases in LANL employment.	As a direct consequence of the Proposed Action Alternative, there would be a small alteration of the overall daily commute for DOE and contractor personnel relocated from the DOE LAAO, TA 21, and DP Road Tracts. Development of the tracts would greatly increase the number of trips generated. Traffic entering or exiting 6 of the 10 tracts during the peak hours would increase by a range of 750 to 3,775 trips per day. Cumulative impacts to regional transportation include substantial increases in overall regional and local traffic that would require improvements to traffic controls, new roads, road widening, and bridges. The anticipated impacts to transportation would be expected to be concentrated near the Los Alamos townsite and the LANL area.
Infrastructure	Under the No Action Alternative, utility demand and infrastructure needs generated by current tract activities would not change from current levels. There would continue to be increases regionally in utility demand and in the need for additional sources, distribution systems and waste disposal infrastructure due to LANL activities and other regional developments. The electrical system is already at the limits of its capacity. The electrical power demand will exceed capacity with the addition of the Strategic Computing Complex. The projected No Action Alternative utility usage is: • Electrical Use: 799 gwh • Peak Power: 116 mw • Natural Gas: 3,273 mcf (92,730 mly) • Water: 1,851 mgy (7016 mly) • Solid Waste: 20,981 tpy (19,028 mty) • Wastewater Sewage: 962 mgy (3,642 mly)	Under the Proposed Action Alternative, assuming full implementation of the contemplated developments on the tracts within 10 years, the total estimated increases in utility usage would be: • Electrical Use: 32 gwh • Peak Power: 6 mw • Natural Gas: 459 mcf (13,000 mly) • Water: 382 mgy (1,446 mly) • Solid Waste: 2,385 tpy (2,163 mty) Increases in discharges could be 132 mgy (500 mly) for the Bayo Wastewater Treatment Plant and 41 mgy (155 mly) for the White Rock Wastewater Treatment Plant. The capacity of the electrical power system will be exceeded. Water usage demand is projected to exceed water rights. Natural gas delivery systems may have to be upgraded to handle the increased demand. The existing wastewater treatment capacity also would be exceeded. Solid waste production is expected to reduce the expected life of the regional landfill.

Table 2.5.1-1. Comparison of Impacts of the Alternatives (Continued)

RESOURCE AREA	NO ACTION ALTERNATIVE	PROPOSED ACTION ALTERNATIVE
Noise	Under the No Action Alternative, noise levels associated with activities on the tracts would remain the same as they are currently. Minor increases in ambient noise would be expected due to anticipated increases in vehicle traffic, regional development and construction, and LANL activities such as explosives testing.	Ambient noise levels would be expected to increase above current levels for most of the contemplated land uses. Ambient noise levels associated with cultural preservation may decrease, and noise levels associated with natural areas would be expected to remain the same or increase slightly. Noise associated with transportation and utility corridors would remain the same or could increase with additional infrastructure construction and use. Demolition and construction activities would be expected to temporarily elevate noise levels on the tracts from the No Action Alternative levels to a range of 74 to 95 dBA. Residential uses typically would result in ambient noise levels between 50 and 70 dBA depending on traffic, density, and location. Commercial and industrial land uses typically would result in 60 to 70 dBA. Noise would be present during a greater part of the day than currently on the tracts that are developed for residential, commercial, and industrial land uses. Overall noise from vehicular traffic would increase.
Visual Resources	Under the No Action Alternative there would be no anticipated changes to visual resources. The visual character of the 10 subject tracts reflect the variety of the Los Alamos region. While some of the tracts include visually discordant elements of developed industrial sites, others include large expanses of natural and undeveloped canyon areas.	Under the Proposed Action Alternative, the scenic class objectives for most of the tracts would be met because the visual character would not change substantially. The visual resources of some tracts may be improved by the removal and replacement of industrial buildings. Development on currently undeveloped tracts would negatively impact visual character. Important viewsheds in the vicinity of BNM could be negatively impacted.

Table 2.5.1-1. Comparison of Impacts of the Alternatives (Continued)

RESOURCE AREA	NO ACTION ALTERNATIVE	PROPOSED ACTION ALTERNATIVE
Socioeconomic	Under the No Action Alternative there would be no change in the employment, income, population, and housing associated with the 10 subject tracts. Regional economic growth and efforts toward self-sufficiency would continue but at a slower rate.	Under the Proposed Action Alternative, short-term economic gains due to construction activities would be expected. Long-term gains would be dependent on the intensity and success of the proposed development scenarios. If implemented, 320 businesses could be developed on the tracts, employing up to 6,080 workers and generating a total of 8,957 jobs within the ROI. As many as 2,360 residences would be placed on the tracts, increasing White Rock and Los Alamos population by 6,620 residents. Overall impacts to employment, income, population, and housing would be minor within the ROI, but would be concentrated in the Los Alamos area. Improvements would be expected in the Los Alamos County tax base but would probably not offset the loss of assistance payments, according to information provided by the County (see Chapter 18, Section 18.1).
Ecological Resources	Under the No Action Alternative, responsibility for ecological resource protection would remain with the DOE, and active management of these resources would continue. Regional growth would reduce the amount of undisturbed habitat and increase pressure on remaining ecological resources.	Under the Proposed Action Alternative, responsibility for ecological resource protection and planning would pass to the receiving parties, who may not have regulations that match the Federal review and protection process. Current resource protection and management plans would not be in effect for the subject tracts. Development or redevelopment of 826 acres (335 hectares), as contemplated by the receiving parties, could result in the heavy modification or destruction of approximately 770 acres (312 hectares) of relatively undisturbed habitat, primarily ponderosa pine forest and pinyon-juniper woodland. Development also would be expected to degrade large amounts of habitat near the developed portion of the land tracts. Habitat would be impacted or lost for Federal-protected species such as the American peregrine falcon and Mexican spotted owl. Habitat destruction would affect wildlife through direct mortality and relocation to other lands.

Table 2.5.1-1. Comparison of Impacts of the Alternatives (Continued)

RESOURCE AREA	NO ACTION ALTERNATIVE	PROPOSED ACTION ALTERNATIVE
Cultural Resources	Under the No Action Alternative, responsibility for cultural resource protection would remain with the DOE, and active management of these resources would continue. Possible impacts from natural processes, vandalism, unauthorized collection of artifacts, and disturbance of traditional places and ceremonies would continue. Resource loss associated with regional development would continue.	Under the Proposed Action Alternative, there would be a transfer of over 254 known cultural resources and historic properties from the management and protection of the DOE. The disposition of the tracts may affect the protection and accessibility to Native American sacred sites or sites needed for traditional practices and the disposition of human remains, funerary objects, sacred objects, and objects of cultural patrimony. The subsequent development or redevelopment of approximately 826 acres (335 hectares) of the tracts could result in physical destruction, damage, or alteration of cultural resources on the subject tracts and in adjacent areas and disturbance of traditional religious practices. Increased access and recreational use could result in resource impacts in an area extending far beyond the development boundaries.
Geology and Soils	Under the No Action Alternative, impacts to geology and soils would be limited to natural effects of erosion, wildfires, and earthquakes.	Under the Proposed Action Alternative, soil would be disturbed in areas where development is planned and adjacent areas. Removal of vegetation and increased runoff from impermeable surfaces could increase erosion on some tracts.
Water Resources	Under the No Action Alternative, there would be no new additional impacts to surface water and groundwater quality and quantity. Increased use of groundwater due to LANL activities and regional growth would continue. New regional construction would increase the potential for degradation of surface water quality due to construction activity and increased pollutant loads and surface runoff volumes.	Contemplated residential, industrial, and commercial development would require an additional 382 mgy (1,446 mly) of groundwater, exceeding water rights, potentially accelerating drawdown of the main aquifer, and impacting amounts of cheaply available water. Placement of new water supply wells could impact groundwater quality. Construction activity and the creation of additional impermeable surfaces during development could impact surface water quality by increasing pollutant loads and runoff volumes.

Table 2.5.1-1. Comparison of Impacts of the Alternatives (Continued)

RESOURCE AREA	NO ACTION ALTERNATIVE	PROPOSED ACTION ALTERNATIVE
Air Resources	Under the No Action Alternative, air quality impacts from the 10 tracts would remain the same. Monitoring by the State Air Quality Bureau has demonstrated that Region 3, which includes the 10 tracts, meets all applicable air quality standards. Expected regional growth and planned LANL activities would not impact air quality.	Under the Proposed Action Alternative, there would be increases in criteria pollutants from mobile sources and homes using natural gas or propane. Slight increases in emissions of hazardous air pollutants would be expected from industrial facilities. Development of the tracts would bring members of the public closer to LANL sources of hazardous, toxic chemical, and radioactive air pollutants. In all cases, health-based air quality standards would not be exceeded. Development would be associated with increased use of artificial light, which could impact the visibility of the night sky.
Global Climate Change	Emissions of greenhouse gases in the Los Alamos region from tract activities would remain the same. Expected regional growth and planned LANL activities would cause minor increases in emissions of greenhouse gases due to the combustion of natural gas, diesel fuel, gasoline, and firewood.	Emissions of greenhouse gases related to tract activities would increase more than 25-fold due to motor vehicle traffic and use of fossil fuels. This would represent a shift of impacts from other areas and would not be an important contribution to global climate change.

Table 2.5.1-1. Comparison of Impacts of the Alternatives (Continued)

RESOURCE AREA	NO ACTION ALTERNATIVE	PROPOSED ACTION ALTERNATIVE
Human Health	There are no identifiable human health consequences of the No Action Alternative. The possible human health impacts of radiation exposure, chemical contaminants, facility accidents and natural event accidents would not be affected by implementation of the No Action Alternative.	Under the Proposed Action Alternative, no discernible individual human health effects are anticipated. As many as 900 new residents could be brought into closer proximity to LANL facilities at the DOE LAAO and DP Road Tracts, and another 2,200 residents and lodgers at the White Rock Tract. Commercial development could bring as many as 6,000 private-sector employees into existing radiation buffer zones at the DP Road, TA 21, and Airport Tracts. While the maximally exposed individual radiation doses would not increase, these developments would mean increased total population exposures to radiological and chemical emissions from normal LANL operations and hypothetical accidents. A substantial increase in the public collective radiation dose and latent cancer fatalities would result. Risk of developing excess latent cancer fatalities on the subject tracts from accident events could maximally increase from about 57 excess cancer deaths to about 98 excess cancer deaths. Development of the tracts by the recipients would involve construction risks to workers and also subsequent risks to workers engaged in industrial activities.
Environmental Justice	There are no high and adverse human health impacts to minorities or low-income populations in the area, and there would be no change under the No Action Alternative.	No direct adverse effects on minority or low-income populations are expected under the Proposed Action Alternative. Indirect impacts to TCPs potentially may cause disproportionately high or adverse effects on minority or low-income communities, but these effects cannot be determined at this point in the consultation process. The Homesteaders Association of the Pajarito Plateau (as regards all the tracts) and legal counsel for the Pueblo of San Ildefonso (as regards four specific tracts) have expressed their opinions that the conveyance and transfer actions would have additional environmental justice impacts on their populations.

Notes: gwh = gigawatt-hours, mcf = million cubic feet, mgy = million gallons per year, mw = megawatt, tpy = tons per year, mty = metric tons per year

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
Rendija Canyon	Land Use	Natural Areas and Residential	Land use would change. Approximately 570 acres (230 hectares) would be disturbed and developed for single- and multiple-family housing, roadways, and community facilities. Approximately 340 acres (137 hectares) would be reserved as natural areas and dedicated to open-space and recreational land uses. Natural areas would be reduced in size and used more intensively. Residential land use may be incompatible with resource protection on adjacent lands and some forms of recreational activity may be curtailed. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing, cleanup levels, and inclusion of certain buildings may be influenced by this land use scenario and input from the receiving party.
		Cultural Preservation	Land use for the entire tract (approximately 910 acres [368 hectares]) would change from passively managed recreational and open-space uses to restricted access cultural preservation land. Future use of this tract by the general public would be eliminated and resources would be managed in a manner determined by the receiving party. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing, cleanup levels, and inclusion of certain buildings may be influenced by this land use scenario and input from the receiving party.
	Transportation	Natural Areas and Residential	Access roads and new streets within the tract would be required to support the residential development. An estimated 12,058 trips per day would be expected to be added to the local transportation system, with an increase of up to 819 trips during peak-hour traffic. The volume of additional trips would be expected to degrade traffic flow and to require improvements to regional transportation infrastructure.
		Cultural Preservation	A decrease in vehicle use would be expected on Rendija Canyon Road as public access is removed or restricted. Easements would be required to permit access to Santa Fe National Forest lands and to maintain or operate existing infrastructure.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
Rendija Canyon (Continued)	Infrastructure	Natural Areas and Residential	Residential development would require new utility delivery and wastewater infrastructure. Utility usage would be estimated to increase annually by the following amounts: electricity, 8 gwh; natural gas, 164 mcf (4,644 mly); water, 126 mgy (477 mly); and sewage, 63 mgy (238 mly).
		Cultural Preservation	Current low utility usage would continue or be reduced, and some infrastructure supporting the Los Alamos Sportsman's Club may be removed.
	Noise	Natural Areas and Residential	Noise associated with construction would increase temporarily. Noise associated with residential and vehicle use would be more frequent and could increase from a current maximum of 40 dBA (estimated) to about 60 or 70 dBA. Noise from Los Alamos Sportsman's Club activities would be closer to residential receptors. Should Los Alamos Sportsman's Club activities eventually be relocated, these noise impacts would occur at the new location.
		Cultural Preservation	Noise events would greatly diminish due to restrictions on vehicular access and removal of the Los Alamos Sportsman's Club.
	Visual Resources	Natural Areas and Residential	Residential construction would impact high public value (Scenic Class II) visual resources.
		Cultural Preservation	Visual resources would be maintained; however, access to views within the tract would be reduced.
	Socio-economics	Natural Areas and Residential	The construction of new residential areas would temporarily increase employment in the ROI. Residential development would not impact overall stable growth within the ROI. Overall employment, income, population, housing, and community services would be expected to maintain stable growth within the ROI.
		Cultural Preservation	Current socioeconomic forces are likely to be maintained; however, a slight decrease is possible.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
Rendija Canyon (Continued)	Ecological Resources	Natural Areas and Residential	Approximately 570 acres (230 hectares) of ponderosa pine forest and pinyon-juniper woodland habitat would be severely modified or lost due to residential development. The development would effectively disrupt the structure and function of the existing Rendija Canyon ecosystem. After development, impacts to wildlife species, primarily birds, could occur due to predation from domestic animals. There would be a loss of preferred habitat for the Federal-listed American peregrine falcon and Mexican spotted owl. The adjacent habitat would also experience a lost of quality due to segmentation and other effects. The loss of acreage due to development would result in a reduction of breeding and foraging habitat for wildlife currently utilizing the property.
		Cultural Preservation	The transition of this area from bare ground and weedy vegetation to natural vegetation (primarily grassland and ponderosa pine) is anticipated to result from the removal of Los Alamos Sportsman's Club. Wildlife disturbance, both visual and auditory, from recreational use would be diminished. Consequently, ecological resources would be maintained and slightly improved as access to this area is reduced.
	Cultural Resources	Natural Areas and Residential	Access to cultural resources would increase with the introduction of additional residents, the sanctioning of recreational uses, and any trail enhancements, thereby causing possible destruction and damage to resources, vandalism, unauthorized collection of materials and artifacts, and disturbance of traditional practices and ceremonies. Residential development would cause large-scale disturbance to the cultural resources of this tract due to construction, grading, and trenching; construction of access roads and new streets associated with this development would have similar impacts. Development may potentially impact natural resources utilized by traditional communities.
		Cultural Preservation	Dedicating the tract to cultural preservation is anticipated to have a beneficial impact on the cultural resources present; restricted access by the general public would help protect the resources. Another positive impact would be the passive preservation of resources and continued access to traditional cultural properties afforded to traditional practitioners of the receiving party. There may be negative impacts to some current traditional users if general access is restricted. Ongoing negative impacts from natural processes (such as erosion) on the physical integrity of cultural resources would continue.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
Rendija Canyon (Continued)	Geology and Soils	Natural Areas and Residential	Residential development (approximately 570 acres [230 hectares]), transportation networks and sewer and electrical utilities would cause soil disturbances. New structures would be susceptible to a magnitude 7 seismic event and to wildfire episodes. Wildfires, in addition to the potential impact to structures, would remove ground cover vegetation, causing increased soil erosion and transport via surface runoff.
		Cultural Preservation	The current geological conditions would likely remain the same; no impacts are expected. However, removal of the Los Alamos Sportsman's Club facilities may cause soil disturbance; but restricting recreational access may decrease erosion.
	Water Resources	Natural Areas and Residential	Residential development could potentially impact surface water quality and quantity within and downstream of the tract, due to runoff from paved roads and developed areas. Development would contribute to overall regional groundwater drawdown and reduced quantities of cheaply treatable water supplies.
		Cultural Preservation	The current surface water and groundwater conditions would likely remain the same; no impacts are expected.
	Air Resources	Natural Areas and Residential	The canyon air quality would likely remain the same for hazardous and radioactive air pollutants. However, air quality would deteriorate slightly due to increased use of motor vehicles, which emit slight quantities of several criteria pollutants. Homes heated with natural gas, which emits trace quantities of some criteria pollutants, would also contribute to the reduction of air quality. Contributions to global climate change would increase on the tract from 30 tons (27 metric tons) per year to 22,000 tons (20,000 metric tons) per year of carbon dioxide due to increases in motor vehicle traffic and residential use of fossil fuels.
		Cultural Preservation	Dedicating this canyon to cultural preservation would result in fewer visitors, which, in turn, would reduce already negligible emissions of criteria pollutants and greenhouse gases. Air quality would be unchanged, and tract contributions to global climate change would be slightly reduced.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
Rendija Canyon (Continued)	Human Health	Natural Areas and Residential	The addition of 3,500 new residents in close proximity to LANL facilities would increase the number of people exposed to radiological and chemical air pollutants emitted by LANL operations. Residential development also would introduce more sensitive receptors, such as children and pregnant females, to an area that currently has a single residence. The closer proximity would slightly increase the radiation dose received by the collective population within the ROI. In addition, closer public proximity would result in greater public consequences from some hypothetical accidents at LANL facilities. Physical injury to an increased number of individuals could also occur if any one of three natural events takes place (flood, seismic, or wildfire) in Rendija Canyon.
		Cultural Preservation	The human health consequences would be similar to the No Action Alternative.
	Environmental Justice	Natural Areas and Residential or Cultural Preservation	No disproportionately high and adverse impacts on minority and low-income populations are anticipated from implementing the contemplated land uses on this tract. Rendija Canyon has been identified as a location with TCPs; however, effects to these resources cannot be determined at this time. Legal counsel for the San Ildefonso Pueblo has expressed the opinion that conveyance of the tract and subsequent use would result in environmental justice impacts to the Pueblo's population. Modest economic benefits would arise from the additional jobs created during the construction of new housing in this area. However, restricting public use of roads and trails in Rendija Canyon would hinder public access to National Forest lands, which afford not only recreation opportunities for the general public but serve as traditional firewood gathering and collection areas for other forest products by local Hispanic and Native American populations. Therefore, restricted access to this area could have a disproportionately adverse impact on these minority populations if gathering and collection is sufficiently performed by low-income or minority populations in these areas.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
DOE LAAO	Land Use	Residential	Land use would change from professional office to residential, which would be compatible with adjacent land use. An estimated 9 to 10 acres (3 to 4 hectares) of the total 15-acre (6-hectare) tract would be developed for multiple-family residential use. The DOE LAAO Building and steam plant would be removed. This land development would accommodate apartments or condominiums at an average density of 20 dwellings per acre or 180 to 200 dwellings. The remaining acreage would be used for parking, and open areas would be landscaped to maintain the residential character of the development. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing, cleanup levels, and inclusion of certain buildings may be influenced by this land use scenario and input from the receiving party.
		Commercial	Commercial development would represent a continuation of current land use. The existing DOE administrative building would be converted to commercial office space that would accommodate a total of 6 businesses and 15 vehicles. The steam plant would remain, and no additional development is contemplated. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing, cleanup levels, and inclusion of certain buildings may be influenced by this land use scenario and input from the receiving party.
	Transportation	Residential	The proposed residential development would impact the daily commute for the DOE and contractor personnel relocated from the DOE LAAO; some will have a shorter drive to work, but most would have farther to travel. Traffic entering or exiting the area could increase by as many as 86 trips during peak hours of the work week.
		Commercial	Because land use would not change substantially, the current traffic volumes (defined as good operating conditions with stable flow) are anticipated to remain essentially the same with only a slight increase during peak hours.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
DOE LAAO (Continued)	Infrastructure	Residential	Residential development would require enhancement of existing infrastructure: electric, gas, water, and sewage lines would need to be extended to service new structures; and new roads parking areas, and structures would be developed. Utility usage would be estimated to increase annually by the following amounts: electricity, 1.3 gwh; natural gas, 26 mcf (736 mly); water, 20 mgy (76 mly); and sewage, 10 mgy (38 mly). These increases are not anticipated to exceed the existing capacity for any utility.
		Commercial	Existing infrastructure would not need to be modified to accommodate commercial land use. Utility usage would be estimated to increase annually by the following amounts: electricity, 0.3 gwh; natural gas, 3 mcf (85 mly); water, 3 mgy (11 mly); and sewage, 1 mgy (4 mly). These increases are not anticipated to exceed the existing capacity for any utility.
	Noise	Residential	Residential use would result in ambient noise levels of 60 to 70 dBA due to vehicular traffic and residential activities. There would be more vehicle traffic into and out of the tract (500 residents versus 130 employees), and it would occur during longer periods of the day. During demolition of existing buildings and construction of residences, ambient noise would increase from about 40 to 50 dBA to about 95 dBA.
		Commercial	The current noise level, which is largely determined by background noises from traffic on nearby Trinity Drive and Los Alamos Canyon bridge, would likely remain the same if the land is commercially used; that is, from 40 to 50 dB.
	Visual Resources	Residential	The developed portions of the tract are considered to be of low public value (Scenic Class IV), while the undeveloped portions are considered to be of moderate public value (Scenic Class III). Residential development would be accomplished without substantial change to the visual character of this tract.
		Commercial	No impacts are expected from this development scenario; the office building would remain, and no roads or other structures would be added.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
DOE LAAO (Continued)	Socio-economics	Residential	Construction activities would temporarily increase employment in the ROI, which, in turn, would generate increases in ROI income. However, no impacts on area population and housing would be expected because the majority of new residents on the tract and temporary jobs generated by this development would be filled by the existing ROI labor force.
		Commercial	There would be possible short-term economic gains from minor construction as well as long-term economic gains from the industries using the land. Approximately 120 workers would be employed on the tract and 200 jobs would be generated in the ROI and filled by the existing labor force; therefore, no impacts on area population and housing would be expected.
	Ecological Resources	Residential	Given the limited acreage involved and existing developed nature of the site, impacts are expected to be small. Approximately 6.5 acres (2.6 hectares) of ponderosa pine forest would be lost as the area is converted to housing, roadways, and residential landscaping. After development, impacts to wildlife species, primarily birds, could occur due to predation from domestic animals.
		Commercial	Because no change in land use is expected under this development scenario, no adverse impacts to ecological resources are projected. However, the environmental review and protection processes for future activities would not be as rigorous as those that govern the DOE.
	Cultural Resources	Residential	This tract would be extensively altered by construction activities, including demolition of buildings, grading, and trenching. Two buildings considered potentially eligible to the NRHP would be demolished. Activities also could result in primary impacts to other unidentified historic properties through physical destruction, damage, or alteration.
		Commercial	No discernible impacts to cultural resources are expected because no new development is planned. The use of the DOE LAAO Building, a potentially eligible resource, would continue, and the building would not be demolished although modifications would be likely.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
DOE LAAO (Continued)	Geology and Soils	Residential	This development scenario would require extensive ground disturbance to remove existing structures and redesign for residential use.
		Commercial	No soil disturbance or change in availability of resources are anticipated. No impacts from this development scenario are expected.
	Water Resources	Residential	In developed areas, surface water quality may be indirectly affected outside the tract during and after construction. Development will not affect groundwater quality or quantity beneath the tract but may contribute to the overall regional water level decline and possibly result in degradation of water quality within the aquifer.
		Commercial	The current surface water and groundwater conditions would likely remain the same; no impacts are expected.
	Air Resources	Residential	There would be no emissions of hazardous or other chemical air pollutants and no emissions of radioactive air pollutants. However, air quality would deteriorate slightly due to increased use of motor vehicles, which emit slight quantities of several criteria pollutants (primarily trace amounts of carbon monoxide and ozone). Homes heated with natural gas, which emits trace quantities of some criteria pollutants, would also contribute to the reduction of air quality. Contributions to global climate change would increase from about 130 tons (120 metric tons) per year to an estimated 3,300 tons (3,000 metric tons) per year of carbon dioxide due to increases in motor vehicle traffic and residential use of fossil fuels.
		Commercial	The current air quality conditions would likely remain the same; no adverse impacts are expected. Contributions to global climate change will remain at an estimated 130 tons (120 metric tons) per year of carbon dioxide.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
DOE LAAO (Continued)	Human Health	Residential	The addition of 500 new residents in close proximity to LANL facilities would increase the number of people exposed to radiological and chemical air pollutants emitted by LANL operations. Residential development also would introduce more sensitive receptors, such as children and pregnant females, to an area that currently hosts only LANL-related workers. The closer proximity would slightly increase the radiation dose received by the collective population within the ROI. In addition, closer public proximity would result in greater public consequences from some hypothetical accidents at LANL facilities.
		Commercial	Commercial development poses the same human health consequences as those discussed for residential development, but are lessened by three factors: (1) fewer members of the public would use the tract (an estimated 120 workers), (2) workers would be present less often than residents, and (3) the work force would contain fewer sensitive receptors.
	Environmental Justice	Residential or Commercial	No disproportionately high and adverse impacts on minority and low-income populations are anticipated from implementing the contemplated land uses on this tract. Modest economic benefits would arise from the additional jobs created during the construction and operation of the new facility. Secondary effects would include small increases in business activity and would likely increase revenues to local government.
Miscellaneous Site 22	Land Use	Commercial	The land use of this tract (less than 0.5 acre [0.2 hectare]) would change from a LANL buffer area used for unauthorized parking to a sanctioned parking area. Activity levels would likely remain same and, therefore, no discernible impacts are expected. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing and cleanup levels may be influenced by this land use scenario and input from the receiving party.
	All Others	Commercial	Commercial development of this tract is not expected to adversely impact any of the remaining resource areas; resource conditions would likely remain the same.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
Miscellaneous Manhattan Monument	Land Use	Historic Preservation	Land use proposed for this site would result in the continued historic preservation of the tract. Landscaping and other routine maintenance activities would continue on an as-needed basis, and the general public would have unrestricted access to the site and its surrounding area. No environmental restoration activities are planned.
	Cultural Resources	Historic Preservation	This monument is a contributing element of an NRHP-listed resource and as such, according to the Criteria of Adverse Effect (36 CFR 800.5(a)(1)), would be directly impacted if transferred. Impacts would be limited to the potential of transferring this NRHP-eligible resource out of the responsibility and protection of the DOE, which may result in a less rigorous standard of care.
	All Others	Historic Preservation	Historic preservation of this tract is not expected to adversely impact any of the remaining resource areas; resource conditions would likely remain the same.
DP Road	Land Use	Industrial and Commercial	Land use on the relatively level portions of the tract would change from previously disturbed, but mostly undeveloped, buffer lands. Contemplated development would be compatible with existing and adjacent land uses. Approximately 21 of 50 acres (8 of 20 hectares) would be developed for heavy commercial and industrial land use, and an additional 5 acres (2 hectares) would be developed for office space. When fully developed, this tract would be occupied by 40 new businesses with 900 total employees and 24 vehicles. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing, cleanup levels, and inclusion of certain buildings may be influenced by this land use scenario and input from the receiving party. Site buildings would likely remain; but the RAD wastewater line would be removed.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
DP Road (Continued)	Land Use	Commercial and Residential	Land use on the relatively level portions of the tract would change from previously disturbed, but mostly undeveloped, buffer lands. Contemplated development would be compatible with existing and adjacent land uses. Approximately 21 of 50 acres (8 of 20 hectares) would be developed as a residential trailer court that, when fully developed, would be occupied by 160 mobile homes, 400 new residents, and 330 personal vehicles. An additional 5 acres (2 hectares) would be developed for office space that, when fully developed, would be occupied by 10 new businesses with 225 total employees. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing, cleanup levels, and inclusion of certain buildings may be influenced by this land use scenario and input from the receiving party. Site buildings would likely remain; but the RAD wastewater line would be removed.
	Transportation	Industrial and Commercial or Commercial and Residential	For the proposed industrial and commercial development, an estimated 2,312 trips per day would be expected to be added to the local transportation system, with an increase of up to 296 trips during peak-hour traffic. For the proposed commercial and residential development, an estimated 1,941 trips would be expected to be added to the local transportation system, with an increase of up to 178 trips during peak-hour traffic. Consequently, the volume of these additional trips would likely degrade traffic flow and would require improvements to the area transportation infrastructure.
	Infrastructure	Industrial and Commercial	Mixed development would require enhancement of existing infrastructure: electric, gas, water, and sewage lines would need to be extended to service new structures; and new roads, parking areas, and structures would be developed. Utility usage would be estimated to increase annually by the following amounts: electricity, 2.3 gwh; natural gas, 22 mcf (623 mly); water, 20 mgy (76 mly); and sewage, 9 mgy (34 mly). These increases are not anticipated to exceed the existing capacity for any utility.
		Commercial and Residential	Mixed development would require enhancement of existing infrastructure: electric, gas, water, and sewage lines would need to be extended to service new structures; and new roads, parking areas, and structures would be developed. Annual utility usage would be estimated to increase by the following amounts: electricity, 1.6 gwh; natural gas, 26 mcf (736 mly); water, 21 mgy (79 mly); and sewage, 10 mgy (38 mly). These increases are not anticipated to exceed the existing capacity for any utility.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
DP Road (Continued)	Noise	Industrial and Commercial	This land use scenario is estimated to result in an increase of as many as 900 new direct jobs, which would increase traffic flow. Although maximum noise from traffic would not be expected to increase significantly, traffic noises would likely be present for a greater portion of the day as the new employees enter and exit this area. Construction activities would temporarily increase ambient noise levels from about 65 dBA to a range of 74 to 95 dBA.
		Commercial and Residential	Commercial and residential development would have no appreciable difference in ambient noise levels. Noise from traffic likely would be present for a greater portion of the day. Construction activities would be expected to temporarily increase noise levels from about 65 dBA to a range of 74 to 95 dBA
	Visual Resources	Industrial and Commercial or Commercial and Residential	These contemplated land use scenarios would result in similar impacts. The current moderate public value (Scenic Class III) and low public value (Scenic Class IV) visual resources would be maintained; no major impacts are anticipated.
	Socio-economics	Industrial and Commercial	The use of this tract for industrial and commercial development would generate additional employment in the ROI, which would increase ROI income. Minor temporary increases in employment are anticipated from the construction of new facilities, which, in turn, would generate increases in regional income. After development is completed, approximately 900 workers would be employed on the tract, and a total of 1,200 jobs would be generated in the ROI. Jobs would be expected to be filled by the existing ROI labor force.
		Commercial and Residential	The impacts of this land use scenario would be similar to the industrial and commercial land use scenario. However, fewer long-term jobs would be generated because there would be fewer businesses on the land. The addition of 400 residents on the tract would not be expected to impact overall ROI population or public services.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
DP Road (Continued)	Ecological Resources	Industrial and Commercial or Commercial and Residential	These contemplated land use scenarios would result in similar impacts. Approximately 24 acres (10 hectares) of ponderosa pine forest and pinyon-juniper woodland would be lost; as a result, habitat would be degraded or lost for Federal-protected species such as the American peregrine falcon and Mexican spotted owl. Habitat destruction would affect wildlife through direct mortality and relocation to other lands. In areas near residential development, impacts to wildlife species, primarily birds, could occur due to predation from domestic animals.
	Cultural Resources	Industrial and Commercial	Industrial and commercial development would disturb any cultural resources present due to construction, grading, and trenching. These impacts would include the potential destruction of buildings, archaeological sites, and traditional cultural property locations. Cultural resources avoided by construction may become isolated or have their setting disturbed by elements out of character with the resource, such as visual or audible intrusions. Development may potentially impact natural resources utilized by traditional communities.
		Commercial and Residential	The impacts of this land use scenario would be similar to the industrial and commercial land use scenario. However, the development of a residential trailer park could increase access to any cultural resources present nearby. Increased access could result in physical destruction, damage, vandalism, or alteration of cultural resources and disturbance of any traditional practices and ceremonies.
	Geology and Soils	Industrial and Commercial or Commercial and Residential	These contemplated land use scenarios would result in similar impacts. Soil would be disturbed to upgrade utilities and roadways, and for any removal of existing structures or construction of new structures. Any structures on this tract would be vulnerable to greater than magnitude 7 seismic events, and the stability of the canyon rim must be considered. In addition, development would increase the susceptibility of soil erosion after the removal of ground cover vegetation.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
DP Road (Continued)	Water	Industrial and Commercial or Commercial and Residential	These contemplated land use scenarios would result in similar impacts. Development will not affect groundwater quality or quantity beneath the tract; however, any associated increase in water usage may contribute to the overall regional water level decline, which could result in degradation of water quality within the aquifer. Surface water may be impacted if motor oil, gasoline, or other such contaminants are washed from paved areas into the drainage during storm events. Also, runoff may have more erosive power if it is flowing across areas that have been denuded, thereby transporting more sediment into the drainages.
	Air Resources	Industrial and Commercial	This land use scenario would result in an increase in the emittance of criteria pollutants from mobile sources travelling along Trinity Drive and DP Road. No substantial emissions of hazardous, chemical, or radioactive air pollutants would be expected from this land usage. Air concentrations at the tract would deliver a maximum radiation dose of 2.5 millirem to people residing there year-round. Contributions to global climate change would increase appreciably from 400 to 1,800 tons (350 to 1,650 metric tons) per year of carbon dioxide due to increases in motor vehicle traffic.
		Commercial and Residential	For this land use scenario, ambient air concentrations of criteria pollutants would continue to comply with national and State standards; hazardous chemical and radioactive air concentrations would continue to be below health-based standards. However, residential usage of this tract would have less of an impact on air quality than industrial activities because this scenario would generate less vehicle traffic. Contributions to global climate change would increase from 400 to 3,350 tons (350 to 3,000 metric tons) per year of carbon dioxide due to increases in motor vehicle traffic and residential and office use of fossil fuels.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
DP Road (Continued)	Human Health	Industrial and Commercial	The average occupancy (370 people) would be approximately the same as for the commercial and residential land use scenario and, therefore, impacts would be similar. Consequences from this scenario are lesser, however, by two factors: (1) workers would be present less often than residents, and (2) the work force would contain few sensitive receptors (children and pregnant females). New employees would be brought into closer proximity to LANL facilities, which would increase the number of people exposed to radiological and chemical air pollutants emitted by LANL operations. The closer proximity would slightly increase the radiation dose received by the collective population within the ROI. In addition, closer public proximity would result in greater public consequences from some hypothetical accidents at LANL facilities.
		Commercial and Residential	The impacts of this land use scenario are similar to the industrial and commercial land use scenario. However, residential development would introduce more sensitive receptors, such as children and pregnant females, to an area that currently hosts only LANL-related workers.
	Environmental Justice	Industrial and Commercial or Commercial and Residential	No disproportionately high and adverse impacts on minority and low-income populations would be anticipated from implementing the contemplated land uses on this tract. Modest economic benefits would arise from the additional jobs created during the construction and operation of the new facility. Secondary effects would include small increases in business activity and would likely increase revenues to local government. These impacts would be positive and would not disproportionately affect any single group.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
TA 21	Land Use	Commercial and Industrial	Land use would change from LANL industrial uses to private commercial and industrial development, and LANL personnel and activities would have to be relocated. A minimum of 55 acres (22 hectares) would be developed or redeveloped for commercial and industrial uses. Commercial uses could include businesses such as office buildings and business parks, warehouses, parking areas, service stations, repair garages, tire shops, motels and hotels, large stores, and drive-in or take-out facilities. Industrial uses could include light fabrication and manufacturing facilities compatible with other uses currently located at and adjacent to the site. When fully developed, the tract would be occupied by 70 businesses, 1,900 employees, and 56 commercial vehicles. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing, cleanup levels, and inclusion of certain buildings may be influenced by this land use scenario and input from the receiving party. Current structures and the RAD wastewater line would be removed.
	Transportation	Commercial and Industrial	For the proposed commercial and industrial development, an estimated 3,471 trips per day would be expected to be added to the local transportation system, with an increase of up to 464 trips during peak-hour traffic. These additional trips would likely degrade traffic flow and would require improvements to the area transportation infrastructure. Transportation effects of relocating TA 21 personnel would include minor increases in traffic congestion in the immediate area of the new facilities during morning and evening hours.
	Infrastructure	Commercial and Industrial	This proposed land use scenario would require enhancement of existing infrastructure: electric, gas, water, and sewage lines would need to be extended to service new structures; and new roads, parking areas, and structures would be developed. Utility usage would be estimated to increase annually by the following amounts: electricity, 4.0 gwh; natural gas, 39 mcf (1,100 mly); water, 35 mgy (132 mly); and sewage, 19 mgy (72 mly).
	Noise	Commercial and Industrial	Typical construction equipment for use in building the new commercial and industrial facilities temporarily would increase ambient noise levels from less than 50 dBA to a range of 74 to 95 dBA. Maximum noise from traffic would not be expected to increase significantly over current conditions, but would likely be present for a greater portion of the day as new employees enter and exit the area.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
TA 21 (Continued)	Visual Resources	Commercial and Industrial	Overall impacts to visual resources would not be expected to be substantial as a result of this land use. Low public value (Scenic Class IV) visual resources would not be affected or would be improved in developed areas.
	Socio-economics	Commercial and Industrial	The use of this tract for commercial and industrial development would generate additional employment in the ROI, which would increase ROI income. Minor temporary increases in employment are anticipated from the construction of new facilities, which, in turn, would generate increases in regional income. After development is completed, approximately 1,900 workers would be employed on the tract, and a total of 3,100 jobs would be generated in the ROI. Jobs would be expected to be filled by the existing ROI labor force.
	Ecological Resources	Commercial and Industrial	Under this proposed development scenario, most of the development footprint would be on previously disturbed land. However, approximately 5 acres (2 hectares) of ponderosa pine forest, pinyon-juniper woodland, shrub, and grassland habitat would be severely modified or lost; as a result, habitat would be degraded or lost for Federal-protected species such as the bald eagle, American peregrine falcon, and Mexican spotted owl. Habitat destruction would extend to adjacent undeveloped areas and would affect wildlife through direct mortality and relocation to other lands.
	Cultural Resources	Commercial and Industrial	Commercial and industrial development would disturb any cultural resources present due to demolition, construction, grading, and trenching. These impacts would include the destruction of archaeological sites, potentially eligible historic buildings, and traditional cultural property locations. Cultural resources avoided by construction may become isolated or have their setting disturbed by elements out of character with the resource, such as visual or audible intrusions. Development may potentially impact natural resources utilized by traditional communities.
	Geology and Soils	Commercial and Industrial	Soil would be disturbed to upgrade utilities and roadways and for any removal of existing structures or construction of new structures. Any structures on this tract would be vulnerable to greater than magnitude 7 seismic events. In addition, development would increase the susceptibility of soil erosion after the removal of ground cover vegetation.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
TA 21 (Continued)	Water Resources	Commercial and Industrial	Development will not affect groundwater quality or quantity beneath the tract. However, any associated increase in water usage may contribute to the overall regional water level decline, possibly resulting in degradation of water quality within the aquifer. Two sources of surface water would be removed prior to disposition of the tract, thereby reducing the quantity of surface water discharged into the adjacent canyons. Also, runoff may have more erosive power if it is flowing across areas that have been denuded, thereby transporting more sediment into the drainages.
	Air Resources	Commercial and Industrial	This land use scenario would result in a slight increase in the emittance of criteria pollutants from mobile sources and businesses using natural gas or propane. However, the removal of LANL operations from this tract would result in decreased concentrations of hazardous and chemical air pollutants. In short, air quality would improve somewhat. Doses from the inhalation of radioactive air pollutants would continue at approximately 2.5 to 4.0 millirem per year; most of this dose is the result of operations at the Los Alamos Neutron Science Center, not the idled TA 21 operations. Contributions to global climate change would decrease from an estimated 7,800 to 2,500 tons (7,000 to 2,200 metric tons) per year of carbon dioxide, due largely to the cessation of LANL activities. Regionally, carbon dioxide emissions could increase by 2,500 tons (2,267 metric tons) if tritium research is continued elsewhere on LANL.
	Human Health	Commercial and Industrial	As many as 1,900 private-sector employees would be brought into closer proximity to LANL facilities, which would increase the number of people exposed to radiological and chemical air pollutants emitted by LANL operations. The closer proximity would slightly increase the radiation dose received by the collective population within the ROI. In addition, closer public proximity would result in greater public consequences from some hypothetical accidents at LANL facilities.
	Environmental Justice	Commercial and Industrial	No disproportionately high and adverse impacts on minority and low-income populations would be anticipated from implementing the contemplated land use on this tract. Modest economic benefits would arise from the additional jobs created during the construction and operation of the new facilities. Secondary effects would include small increases in business activity and would likely increase revenues to local government. These impacts would be positive and would not disproportionately affect any single group.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
Airport	Land Use	Airport, Commercial, and Industrial	Proposed land use identified for the Airport Tract north of East Road could include the continued use of approximately 93 acres (38 hectares) for the Airport and other uses. An area of relatively undisturbed land of about 16 acres (6 hectares) also could be developed for heavy commercial land use purposes. Proposed land use to the south of East Road could include the development of about 90 acres (36 hectares) of relatively undisturbed land as an office and business park based on airport-related industry and potential retail uses. When fully developed, lands on both sides of East Road would be occupied by 200 businesses, 3,100 employees, and 120 commercial vehicles. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing, cleanup levels, and inclusion of certain buildings may be influenced by this land use scenario and input from the receiving party.
	Transportation	Airport, Commercial, and Industrial	For the proposed development, an estimated 14,266 trips per day would be expected to be added to the local transportation system, with an increase of up to 1,554 trips during peak-hour traffic. These additional trips would double the traffic on State Road 502, would create traffic jam conditions, and would require improvements to transportation infrastructure.
	Infrastructure	Airport, Commercial, and Industrial	Airport, commercial, and industrial development would require enhancement of existing infrastructure: electric, gas, water, and sewage lines would need to be extended to service new structures; and new roads, parking areas, and structures would be developed. Utility usage would be estimated to increase annually by the following amounts: electricity, 11 gwh; natural gas, 110 mcf (3,120 mly); water, 100 mgy (379 mly); and sewage, 31 mgy (117 mly).
	Noise	Airport, Commercial, and Industrial	Under this land use scenario, construction activities would temporarily increase ambient noise levels from less than 40 dBA to a range of 74 to 95 dBA, resulting from typical construction equipment operation. Once fully developed, traffic from employees and other travelers would comprise the majority of noise in the area. Noise levels along State Road 502 would likely remain the same at about 60 or 70 dBA; however, noises along the northern parts of the tract would increase significantly due to increased traffic along new roads and new commercial and industrial activities, in addition to Airport activities.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
Airport (Continued)	Visual Resources	Airport, Commercial, and Industrial	The proposed airport, commercial, and industrial development would maintain moderate public value (Scenic Class III) visual resources. Development in the southern portion of the tract would impact high public value (Scenic Class II) visual resources from the road and Airport.
	Socio-economics	Airport, Commercial, and Industrial	The use of this tract for airport, commercial, and industrial development would generate additional employment in the ROI, which would increase ROI income. Minor temporary increases in employment are anticipated from the construction of new facilities, which, in turn, would generate increases in regional income. After development is completed, approximately 3,100 workers would be employed on the tract, and a total of 4,327 jobs would be generated in the ROI. Jobs would be expected to be filled by the existing ROI labor force.
	Ecological Resources	Airport, Commercial, and Industrial	Under this proposed development scenario, approximately 90 acres (36 hectares) of ponderosa pine forest and pinyon-juniper woodland would be severely modified or lost; as a result, habitat would be degraded or lost for Federal-protected species such as the bald eagle, American peregrine falcon, and Mexican spotted owl. Habitat degradation would extend to adjacent lands and would affect wildlife through direct mortality and relocation to other lands. The loss of acreage due to development would result in a reduction of breeding and foraging habitat for wildlife currently utilizing the property.
	Cultural Resources	Airport, Commercial, and Industrial	Under this land use scenario, portions of the tract would be extensively altered by construction activities, grading, and trenching. These activities could result in primary impacts to eligible resources through physical destruction, demolition, damage, or alteration. In addition, cultural resources avoided by construction may become isolated or have their setting disturbed by elements out of character with the resource, such as visual or audible intrusions.
	Geology and Soils	Airport, Commercial, and Industrial	Soil would be disturbed to upgrade utilities and roadways and to construct new structures. Any structures on this tract would be vulnerable to greater than magnitude 7 seismic events. In addition, development would increase the susceptibility of soil erosion after the removal of ground cover vegetation.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
Airport (Continued)	Water Resources	Airport, Commercial, and Industrial	The contemplated land use will not affect groundwater quality or quantity beneath the tract; but any associated increased water usage may contribute to the overall regional water level decline, possibly resulting in the degradation of water quality within the aquifer. Development and construction may potentially affect surface water quality within and downstream of the tract because stormwater runoff may increase over areas that have been denuded and carry sediments and surface contaminants into the drainages.
	Air Resources	Airport, Commercial, and Industrial	This land use scenario would result in a slight increase in the emittance of criteria pollutants due to space heating, increased motor vehicle traffic, and, perhaps, steam-generating boilers. However, ambient air concentrations would likely remain with Federal and State standards, and the Los Alamos region would remain an attainment area. Emissions of hazardous other chemical air pollutants are likely to be absent or regulated. Doses from the inhalation of radioactive air pollutants from LANL would continue at approximately 2.1 (western edge) to 5.4 (eastern edge) millirem per year. Contributions to global climate change would increase from an estimated 6 to 6,900 tons (5 to 6,300 metric tons) per year of carbon dioxide, due largely to vehicle use and space and water heating.
	Human Health	Airport, Commercial, and Industrial	As many as 3,100 private-sector employees would be brought into closer proximity to LANL facilities, which would increase the number of people exposed to radiological and chemical air pollutants emitted by LANL operations. The closer proximity would slightly increase the radiation dose received by the collective population within the ROI. In addition, closer public proximity would result in greater public consequences from some hypothetical accidents at LANL facilities.
	Environmental Justice	Airport, Commercial, and Industrial	No disproportionately high and adverse impacts on minority and low-income populations would be anticipated from implementing the contemplated land use on this tract. Modest economic benefits would arise from the additional jobs created during the construction and operation of the new facilities. Secondary effects would include small increases in business activity and would likely increase revenues to local government. These impacts would be positive and would not disproportionately affect any minority or low-income populations.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
White Rock Y	Land Use	Cultural Preservation	The entire tract would be held in cultural preservation; therefore, access to the tract for public recreation and other uses would be denied, and these recreational opportunities would be lost. This decrease in activity would likely prove beneficial to adjacent land use, including Bandelier National Monument and TA 72 operations. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing and cleanup levels may be influenced by this land use scenario and input from the receiving party. Disposition may include cleanup of the two canyon systems.
		Natural Areas, Transportation, and Utilities	The entire tract would be held as an undeveloped natural area and passively managed. Portions of the tract could be used for additions or improvements to utilities or utility corridors, including construction of roads for improved access. Also, the general public would have access to the tract for recreational purposes. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing and cleanup levels may be influenced by this land use scenario and input from the receiving party. Disposition may include cleanup of the two canyon systems.
	Transportation	Cultural Preservation or Natural Areas, Transportation, and Utilities	These contemplated land use scenarios would result in similar impacts. The possible construction of new roads to improve access to utilities on the tract would have no impact on traffic circulation in the area. Therefore, it is expected that the future operational performance of State Road 502, State Road 4, and East Jemez Road would remain similar to that of the existing performance.
	Infrastructure	Cultural Preservation	Under this land use scenario, no changes are anticipated that would affect the utilities and infrastructure; easements for continued use of utilities and the transportation corridor would likely continue.
		Natural Areas, Transportation, and Utilities	Most of the tract would be maintained as a natural area under this land use scenario; however, some land would be used for additions or improvements to utilities such as well construction or utility corridors.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
White Rock Y (Continued)	Noise	Cultural Preservation or Natural Areas, Transportation, and Utilities	Continued use of this tract as a transportation corridor is contemplated under both land use scenarios. Assuming that the two state highways remain in use, ambient noise will probably remain at its currently level, typically ranging from 60 to 70 dBA, with spikes to 90 dBA.
	Visual Resources	Cultural Preservation or Natural Areas, Transportation, and Utilities	This tract would maintain relatively high public value (Scenic Class II) visual resources under both of the land use scenarios; the objective would be to retain the existing visual character of the landscape as much as possible. Access to views within the tract may be limited under the cultural preservation scenario.
	Socio-economics	Cultural Preservation or Natural Areas, Transportation, and Utilities	The contemplated land uses of this tract would have little or no impact on employment, income, population, or housing.
	Ecological Resources	Cultural Preservation	If the tract is culturally preserved, wildlife disturbance, both visual and auditory, from recreational use would be diminished; consequently, habitat for most species would be augmented and improved.
		Natural Areas, Transportation, and Utilities	Under this proposed land use scenario, the general public would have access for recreational purposes. Therefore, impacts to natural resources from recreational use are expected to be minimal, sporadic, and temporary. Minor habitat loss would be expected from development of utility improvements and minor roadway construction.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
White Rock Y (Continued)	Cultural Resources	Cultural Preservation	Dedicating this tract to cultural preservation is anticipated to have a beneficial impact on the cultural resources present. The restriction of access by the general public is anticipated to help protect the resources from vandalism, unauthorized collection of materials and artifacts, and disturbance of traditional practices and ceremonies. Ongoing negative impacts from natural processes (such as erosion) on the physical integrity of cultural resources would continue. There may be negative impacts to some current traditional users if general access is restricted.
		Natural Areas, Transportation, and Utilities	Under this land use scenario, the maintenance of natural areas would allow the passive preservation of cultural resources on the tract. The sanctioning of recreational activities and possible road construction could increase access to resources, increasing opportunities for vandalism and disturbance of traditional practices. Construction activities required for maintaining utilities and establishing new roads could result in physical destruction, damage, or alteration of cultural resources present. In addition, cultural resources avoided by construction may become isolated or have their setting disturbed by elements out of character with the resource, such as visual or audible intrusions. Development may potentially impact natural resources utilized by traditional communities.
	Geology and Soils	Cultural Preservation	If the tract is culturally preserved, there would be no disturbance from development. However, the tract would remain susceptible to wildfires, which could increase erosion potential.
		Natural Areas, Transportation, and Utilities	Some degree of land disturbance associated with additions or improvements to utilities, utility corridors, and access roads would be expected under this land use scenario. In addition, existing and upgraded structures would be vulnerable to greater than magnitude 7 seismic events and wildfire episodes.
	Water Resources	Cultural Preservation or Natural Areas, Transportation, and Utilities	Neither of these proposed land uses would directly or indirectly affect surface water or groundwater quality or quantity.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
	Air Resources	Cultural Preservation or Natural Areas, Transportation, and Utilities	No additional transportation activities are anticipated with either of these land use scenarios and, as such, there would be no additional emission of air pollutants. Air quality would be expected to remain high, and doses from radioactive pollutants from LANL operations would remain less than 2 millirem per year. No contributions to global climate change would be expected because there would be few or no structures on the tract emitting greenhouse gases.
	Human Health	Cultural Preservation or Natural Areas, Transportation, and Utilities	The contemplated land uses for this tract do not increase, and may decrease, the number of workers or members of the public exposed to radiological and chemical air pollutants emitted by LANL operations.
	Environmental Justice	Cultural Preservation or Natural Areas, Transportation, and Utilities	No disproportionately high and adverse impacts on minority and low-income populations would be anticipated from implementing the contemplated land uses on this tract. The White Rock Y Tract has been identified as a location with TCPs; however, effects to these resources cannot be determined at this time. Legal counsel for the San Ildefonso Pueblo has expressed the opinion that conveyance of the tract and subsequent contemplated uses would result in environmental justice impacts to the Pueblo's population.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
TA 74	Land Use	Cultural Preservation	Land use would change from open space buffer with unsanctioned recreational use to cultural preservation. The entire tract would be held in cultural preservation; therefore, access to the tract for public recreation and other uses would be denied and these recreational opportunities would be lost. Land use would be dominated by cultural practices and activities necessary to meet continuing stewardship needs. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing and cleanup levels and buildings may be influenced by this land use scenario and input from the receiving party. Disposition may include cleanup of the canyon systems.
		Natural Areas and Utilities	Under this land use scenario, the entire tract would be held as a natural area and passively managed. Portions of the tract would be used for additions or improvements to utilities, including well construction, enlargement of sewage treatment facilities, utility corridors, and roadways. Access to the majority of the tract by the general public would be unrestricted. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing and cleanup levels may be influenced by this land use scenario and input from the receiving party. Disposition may include cleanup of the canyon systems.
	Transportation	Cultural Preservation or Natural Areas and Utilities	These contemplated land use scenarios would result in similar impacts. The possible construction of new roads to improve access to utilities on the tract would have no impact on traffic circulation in the area. Therefore, the future operational performance of State Road 502 and State Road 4 would be expected to remain similar to that of the existing performance.
	Infrastructure	Cultural Preservation	Under this land use scenario, no change is anticipated that would affect the existing utilities and infrastructure; easements for continued use of utilities would likely continue.
		Natural Areas and Utilities	Most of the tract would be maintained as a natural area under this land use scenario; however, some land could be used for additions or improvements to utilities, such as well construction, the construction of sewage treatment facilities, or utility corridors or roadways.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
TA 74 (Continued)	Noise	Cultural Preservation	If this tract is culturally preserved, ambient noise levels along the southern edge of the tract, which parallels State Road 502, would remain at an estimated 60 to 90 dBA. The remaining tract would remain largely undisturbed by noise (10 to 20 dBA).
		Natural Areas and Utilities	Under this land use scenario, daytime ambient noise levels would likely increase slightly due to vehicle usage, recreational activities, and utility and road construction.
	Visual Resources	Cultural Preservation or Natural Areas and Utilities	This tract would maintain relatively high public value (Scenic Class II) visual resources under both of the land use scenarios; the objective would be to retain the existing visual character of the landscape as much as possible. Access to views within the site may be reduced under cultural preservation.
	Socio-economics	Cultural Preservation or Natural Areas and Utilities	The contemplated land uses for this tract would have little or no impact on employment, income, population, or housing. Modest economic activity may be associated with improvements to utility infrastructure.
	Ecological Resources	Cultural Preservation	If the tract is culturally preserved, wildlife disturbance, both visual and auditory, from recreational use would be diminished; consequently, habitat for most species would be augmented and improved.
		Natural Areas and Utilities	Under this proposed land use scenario, the general public would have access for recreational purposes; but only minimal impacts to natural resources would be expected from such use. If motorized recreational vehicles are permitted, they could contribute to habitat degradation and impacts to the mortality, reproduction, and range of some animals. Minor or short-term consequences to area wildlife would be expected from the development of utility improvements.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
TA 74 (Continued)	Cultural Resources	Cultural Preservation	Dedicating this tract to cultural preservation is anticipated to have a beneficial impact on the cultural resources present. The restriction of access by the general public is anticipated to help protect the resources from vandalism, unauthorized collection of materials and artifacts, and disturbance of traditional practices and ceremonies. Ongoing negative impacts from natural processes (such as erosion) on the physical integrity of cultural resources would continue. There may be negative impacts to some current traditional users if general access is restricted.
		Natural Areas and Utilities	Under this land use scenario, the maintenance of natural areas would allow the passive preservation of cultural resources on the tract. The sanctioning of recreational activities and possible road construction could increase access to resources, increasing opportunities for vandalism and disturbance of cultural practices. Construction activities required for maintaining or improving utilities could result in physical destruction, damage, or alteration of cultural resources present. In addition, cultural resources avoided by construction may become isolated or have their setting disturbed by elements out of character with the resource, such as visual or audible intrusions. Ongoing negative impacts from natural processes (such as erosion) on the physical integrity of cultural resources would continue. Development may potentially impact natural resources utilized by traditional communities.
	Geology and Soils	Cultural Preservation	If the tract is culturally preserved, there would be no disturbance from development. However, the tract would remain susceptible to wildfires, which could increase erosion potential. Little potential exists for seismic impacts.
		Natural Areas and Utilities	Some degree of land disturbance related to new construction or improvement of utilities such as well construction and sewage treatment facilities would be expected under this land use scenario. In addition, existing and expanded structures would be vulnerable to greater than magnitude 7 seismic events and wildfire episodes.
	Water Resources	Cultural Preservation or Natural Areas and Utilities	Neither of these proposed land uses would directly or indirectly affect surface water or groundwater quality or quantity.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
TA 74 (Continued)	Air Resources	Cultural Preservation or Natural Areas and Utilities	No emissions of hazardous or radioactive air pollutants are anticipated with either of these land use scenarios. Further, although there could be a slight increase in emissions of criteria pollutants, concentrations would remain well within State and Federal standards. Contributions to global climate change would continue as small emissions of carbon dioxide continue from the highway maintenance facility.
	Human Health	Cultural Preservation or Natural Areas and Utilities	The contemplated land uses for this tract do not increase, and may decrease, the number of workers or members of the public exposed to radiological and chemical air pollutants emitted by LANL operations.
	Environmental Justice	Cultural Preservation or Natural Areas and Utilities	No disproportionately high and adverse impacts on minority and low-income populations would be anticipated from implementing the contemplated land uses on this tract. The TA 74 Tract has been identified as a location with TCPs; however, effects to these resources cannot be determined at this time. Legal counsel for the San Ildefonso Pueblo has expressed the opinion that conveyance of the tract and subsequent use would result in environmental justice impacts to the Pueblo's population.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
White Rock	Land Use	Commercial and Residential	The commercial and residential development land use scenario would result in a notable change in land use patterns in the White Rock community. Approximately 20 of 100 acres (8 of 40 hectares) would be commercially developed as a recreational vehicle park for an estimated 160 recreational vehicle spaces. Residential areas would include approximately 5 and 35 acres (2 and 14 hectares) of medium- and high-density development, respectively. When the tract is fully developed, there would be 760 new dwelling units, 2,200 new residents, and 1,730 personal vehicles, including recreational vehicles and their occupants. The additional 40 acres (18 hectares) surrounding and between developed areas would be maintained as open space. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing, cleanup levels, and inclusion of certain buildings may be influenced by this land use scenario and input from the receiving party. Disposition may include cleanup of the canyon systems.
		Cultural Preservation and Commercial	This contemplated land use scenario would include the use of less than 10 acres (4 hectares) of the tract for rental storage space or retail businesses, which would, for the most part, represent a continuation of existing and adjacent land use. When fully developed, this portion of the tract would contain 4 businesses with 60 employees and 2 commercial vehicles. Preserved portions of the tract would result in the elimination of public access to the site. However, site activities are already limited by access restrictions on adjacent LANL land and, therefore, no significant change would be anticipated. Planned environmental restoration activities would occur prior to conveyance or transfer; but decisions on timing, cleanup levels, and inclusion of certain buildings may be influenced by this land use scenario and input from the receiving party. Disposition may include cleanup of the canyon systems.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
White Rock (Continued)	Transportation	Commercial and Residential	For the proposed development, an estimated 5,815 trips per day would be expected to be added to the local transportation system, with an increase of up to 378 trips on State Road 4 and State Road 502 during peak-hour traffic. These volumes and additional trips would be expected to create traffic jam conditions on State Road 4; widening of this road would be required to accommodate the additional traffic volume. Pajarito Road would continue to operate at maximum capacity under this land use scenario.
		Cultural Preservation and Commercial	The contemplated land use of this tract would result in no significant changes in traffic volume on State Road 4 or Pajarito Road near the site.
	Infrastructure	Commercial and Residential	Commercial and residential development would require enhancement of existing infrastructure: electric, gas, water, and sewage lines would need to be upgraded to service new structures; and new roads, parking areas, and structures would be developed. Utility usage would be estimated to increase annually by the following amounts: electricity, 5.2 gwh; natural gas, 99 mcf (2,800 mly); water, 81 mgy (307 mly); and sewage, 41 mgy (155 mly).
		Cultural Preservation and Commercial	Under this land use scenario, no utility upgrading would be necessary due to the small number of anticipated businesses; however, some extension of existing utility lines could be required. Utility usage would be estimated to increase annually by the following amounts: electricity, 0.2 gwh; natural gas, 2 mcf (57 mly); water, 2 mgy (8 mly); and sewage, 1 mgy (4 mly).
	Noise	Commercial and Residential	Noise levels on the tract would increase due to increased traffic and number of residents. Although noise levels along State Road 4 would likely remain in the range of 60 to 70 dBA, significant noise increases would occur on the remaining parts of the tract; that is, existing noise levels of 20 to 30 dBA would increase from 40 to 50 dBA. During construction, noises levels would be expected to range from 74 to 95 dBA.
		Cultural Preservation and Commercial	Under cultural preservation, tract noise levels would remain the same as they are currently; however, during commercial construction, noises levels would be expected to range from 74 to 95 dBA.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
White Rock (Continued)	Visual Resources	Commercial and Residential or Cultural Preservation and Commercial	This tract would maintain relatively low public value (Scenic Class IV) visual resources under both of the land use scenarios. However, commercial development under either land use scenario would impact existing moderate public value (Scenic Class III) visual resources on the northwest side of State Road 4, with lesser impacts under the cultural preservation and commercial land use scenario.
	Socio-economics	Commercial and Residential	The use of this tract for commercial and residential development would generate increases in area income; however, these changes would be temporary, lasting only during the construction period. Minor temporary increases in employment are anticipated from the construction of new facilities, which would, in turn, generate increases in regional income. A small number of jobs would be generated by the operation of the recreational vehicle park. Jobs would be expected to be filled by the existing ROI labor force.
		Cultural Preservation and Commercial	Under this land use scenario, there would be short-term increases in area employment and income associated with the construction of limited commercial development and long-term increases once the facilities are operational. These impacts would be greater than those for the commercial and residential land use scenario in that, after development is completed, 60 workers would be employed on the tract and a total of 100 jobs would be generated in the ROI. Jobs would be expected to be filled by the existing ROI labor force.
	Ecological Resources	Commercial and Residential	Approximately 60 acres (24 hectares) of pinyon-juniper woodland would be severely modified or lost under this proposed land use scenario. Habitat would be degraded or lost for Federal-protected species such as the bald eagle, American peregrine falcon, and southwestern willow flycatcher. Habitat destruction would affect wildlife through direct mortality and relocation to other lands. After development, impacts to wildlife species, primarily birds, could occur due to predation from domestic animals.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
White Rock (Continued)	Ecological Resources	Cultural Preservation and Commercial	Under this land use scenario, the potential impacts to natural resources would be similar but less compared to the commercial and residential development scenario. Commercial development would be limited to less than 10 acres (4 hectares) near the highway. Lands culturally preserved would not undergo construction, thus preserving the current vegetation and wildlife habitat. In addition, impacts to wildlife disturbance from recreational use would be diminished due to limited public access. Consequently, habitat for most wildlife species would be augmented and improved.
	Cultural Resources	Commercial and Residential	Under this proposed land use scenario, approximately 60 acres (23 hectares) would be directly disturbed by construction activities. Commercial and residential development would cause large-scale disturbance to any cultural resources present due to construction, grading, and trenching. These activities could result in primary impacts to cultural resources through physical destruction, demolition, damage, or alteration. In addition, cultural resources avoided by construction may become isolated or have their setting disturbed by elements out of character with the resource, such as visual or audible intrusions. Development may potentially impact natural resources utilized by traditional communities. In addition, access to cultural resources would increase with the introduction of additional residents, thereby causing possible destruction and damage to resources, vandalism, unauthorized collection of materials and artifacts, and disturbance of traditional practices and ceremonies.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
White Rock (Continued)	Cultural Resources	Cultural Preservation and Commercial	Dedicating the tract to cultural preservation is anticipated to have a beneficial impact on the cultural resources present; restricted access by the general public would help protect the resources. Another positive impact would be the passive preservation of resources and continued access to traditional cultural properties afforded to traditional practitioners of the receiving party. There may be negative impacts to some current traditional users if general access is restricted. Ongoing negative impacts from natural processes (such as erosion) on the physical integrity of cultural resources would continue. Commercial development, although limited, would cause disturbance to any cultural resources present due to construction, grading, and trenching. These impacts could include the destruction of archaeological sites and traditional cultural property locations. In addition, cultural resources avoided by construction may become isolated or have their setting disturbed by elements out of character with the resource, such as visual or audible intrusions.
	Geology and Soils	Commercial and Residential	The contemplated land use identified for this tract would result in a total of approximately 60 acres (24 hectares) of disturbed land. Any structures would be susceptible to a magnitude 7 seismic event.
		Cultural Preservation and Commercial	The cultural preservation land use scenario limits commercial development, resulting in fewer ground disturbing impacts.
White Rock (Continued)	Water Resources	Commercial and Residential	The contemplated land use will not affect groundwater quality or quantity beneath the tract; but any associated increased water usage may contribute to the overall regional water level decline, possibly resulting in the degradation of water quality within the aquifer. Development and construction may potentially affect surface water quality within and downstream of the tract because stormwater runoff may increase over areas that have been denuded and carry sediments and surface contaminants into the drainages.
		Cultural Preservation and Commercial	The contemplated land use will not affect groundwater quality or quantity beneath the tract; but any associated increased water usage may contribute to the overall regional water level decline, possibly resulting in the degradation of water quality within the aquifer. Development and construction may potentially affect surface water quality within and downstream of the tract because stormwater runoff may increase over areas that have been denuded and carry sediments and surface contaminants into the drainages.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE
	Air Resources	Commercial and Residential	Increase in criteria pollutants from mobile sources, homes, and businesses using natural gas or propane. No new sources of hazardous or radioactive air pollutants are expected. The current baseline would remain unchanged: dose is 1.0 millirem from LANL operations. Contributions to global climate change from tract activities would increase considerably from nearly zero to approximately 14,000 tons (12,600 metric tons) per year of carbon dioxide due to the increase in motor vehicle traffic and commercial and residential fossil fuel use.
		Cultural Preservation and Commercial	No discernible difference in air quality is expected. Emissions of criteria pollutants will increase slightly but remain within State and Federal standards for ambient air quality. Contributions to global climate change from tract activities would increase slightly, from nearly zero to about 150 tons (130 metric tons) per year of carbon dioxide.
White Rock (Continued)	Human Health	Commercial and Residential	As many as 2,200 new residents and lodgers including sensitive receptors would be brought into closer proximity to LANL facilities, which would increase the number of people exposed to radiological and chemical air pollutants emitted by LANL operations. The closer proximity would slightly increase the radiation dose received by the collective population within the ROI. In addition, closer public proximity would result in greater public consequences from some hypothetical accidents at LANL facilities.
		Cultural Preservation and Commercial	A small number of private-sector employees would be brought into closer proximity to LANL facilities, which would increase the number of people exposed to radiological and chemical air pollutants emitted by LANL operations. The closer proximity would slightly increase the radiation dose received by the collective population within the ROI. In addition, closer public proximity would result in greater public consequences from some hypothetical accidents at LANL facilities.
	Environmental Justice	Commercial and Residential or Cultural Preservation and Commercial	No disproportionately high and adverse impacts on minority and low-income populations would be anticipated from implementing the contemplated land uses on this tract. The White Rock Tract has been identified as a location with TCPs; however, effects to these resources cannot be determined at this time. Legal counsel for the San Ildefonso Pueblo has expressed the opinion that conveyance of the tract and subsequent use would result in environmental justice impacts to the Pueblo's population.

Table 2.5.1-2. Summary of Impacts by Land Tract, Resource Area, and Land Use Scenario (Continued)

LAND TRACTS	RESOURCE AREA	LAND USE SCENARIO	SUMMARY OF IMPACTS OF THE PROPOSED ACTION ALTERNATIVE

Notes: Acreages are approximate and may differ from actual ground surveys conducted later in the conveyance and transfer process.
DBA = decibel A-weighted scale, gwh = gigawatts per hour, mcf = million cubic feet, mgy = million gallons per year, mly = million liters per year, mty = metric tons per year.